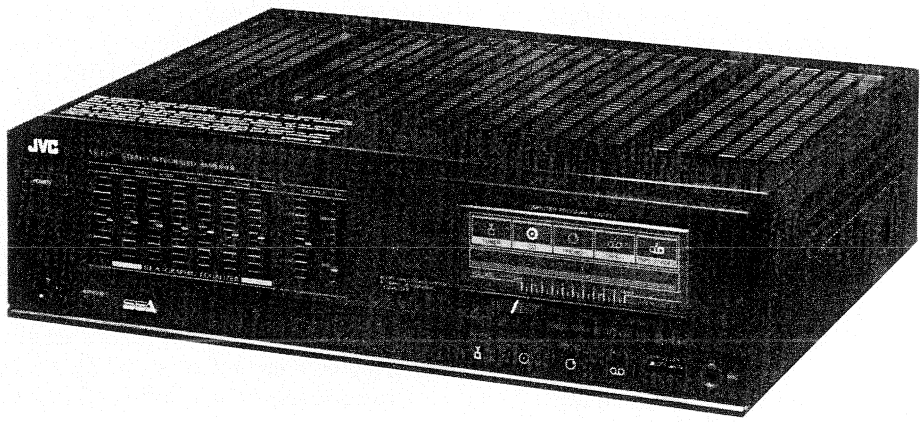
JVC

SERVICE MANUAL

STEREO INTEGRATED AMPLIFIER

MODEL No. AX-E77BK



NOTE:

This amplifier has been developed as higher-grade model for AX-E33BK (The Service Manual for this model has been already issued).
Since the Instruction Book already contained in the AX-E33BK Service Manual is also applicable to the AX-E77BK, please refer to the AX-E33BK Service Manual (No. 2884) for the functions and operations of the model AX-E77BK.

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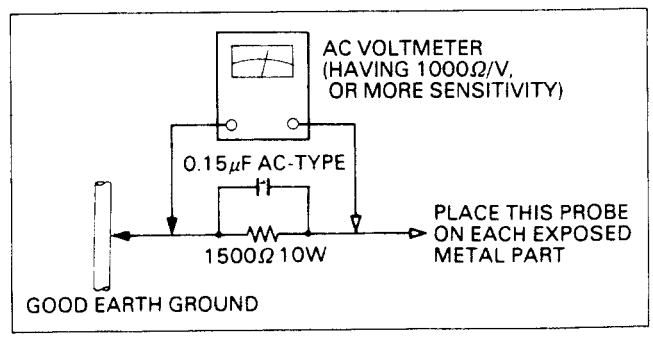
This manual combines two single volumes; Service manual and Parts list.

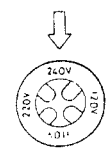
No. 2895
Feb. 1986

Safety Precautions

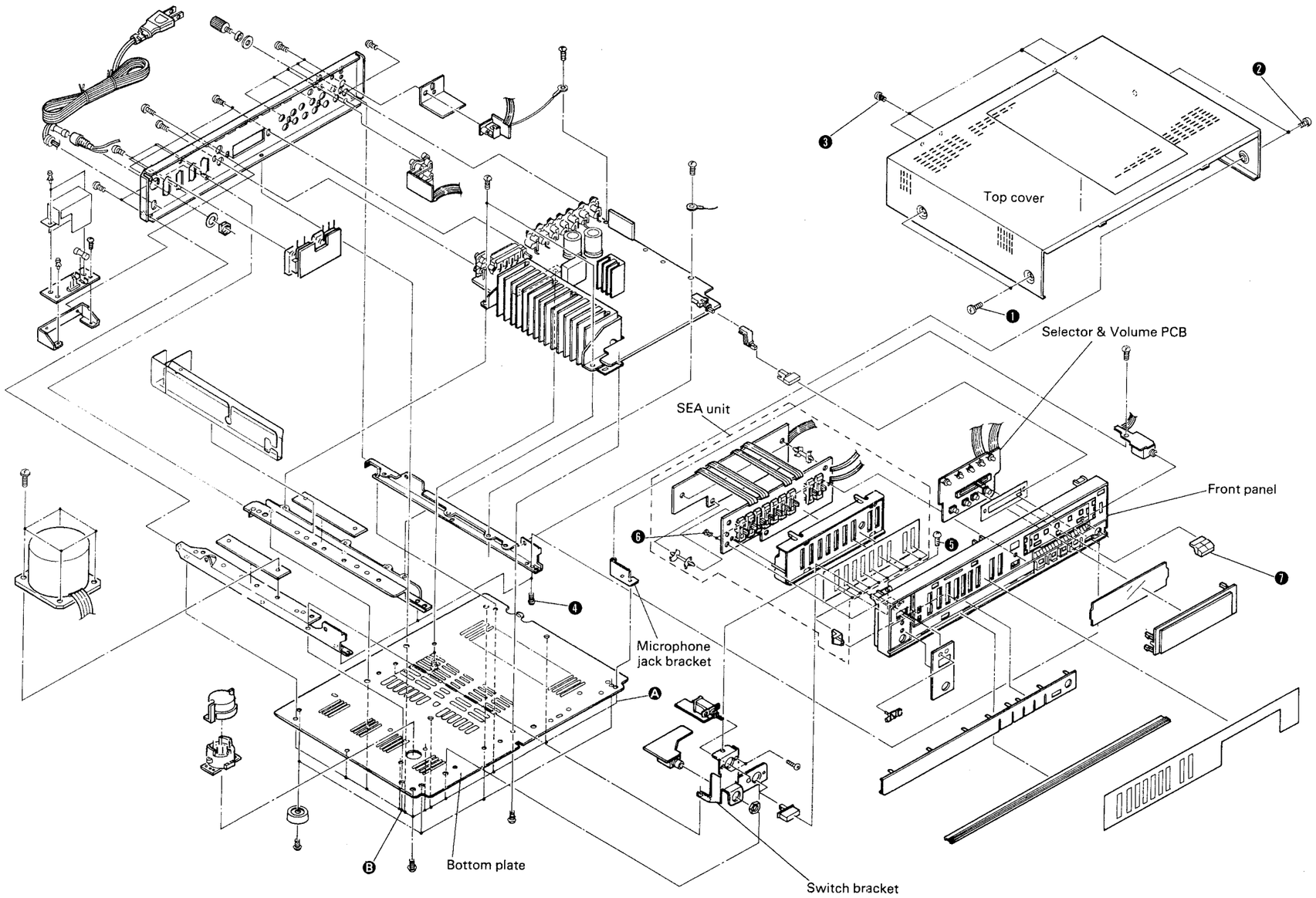
1. The design of this product contains special hardware, many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after reassembling.
5. Leakage current check
   (Safety for electrical shock hazard)
   After reassembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method.
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.).
     This corresponds to 0.5 mA AC (r.m.s.).



CHECKING YOUR LINE VOLTAGE (Except for U.K., Continental Europe and Australia)
Before inserting the power plug, please check this setting to see that it corresponds with the line voltage in your area. If it doesn't be sure to adjust the voltage selector switch to the proper setting before operating this equipment. The voltage selector switch is located underneath the bottom cover.
CAUTION: Before selecting the "Voltage selector switch" to proper voltage disconnect the power plug.



Exploded View and Removal Procedures



■ **Removing the Top Cover**

1. Remove eight screws ❶ – ❸, four of them are on both sides of the top cover and two are on the rear panel.
2. Raise the rear section of the top cover slightly and remove the lugs of the front section. At this time, since the upper side of the front panel is liable to be damaged, attention should be paid not to damage it, such as sticking the cracking-prevention sheet on it.

■ **Removing the Front Panle**

1. Remove the top cover.
2. Remove three screws ❹ retaining the front panel from the bottom and a screw ❺ retaining from the top.

■ **Removing the SEA Unit**

1. Remove the front panel.
2. Remove two rivets ❻ and pull out them toward you.
3. Take off the lugs inseted into the front panel to remove the SEA unit.

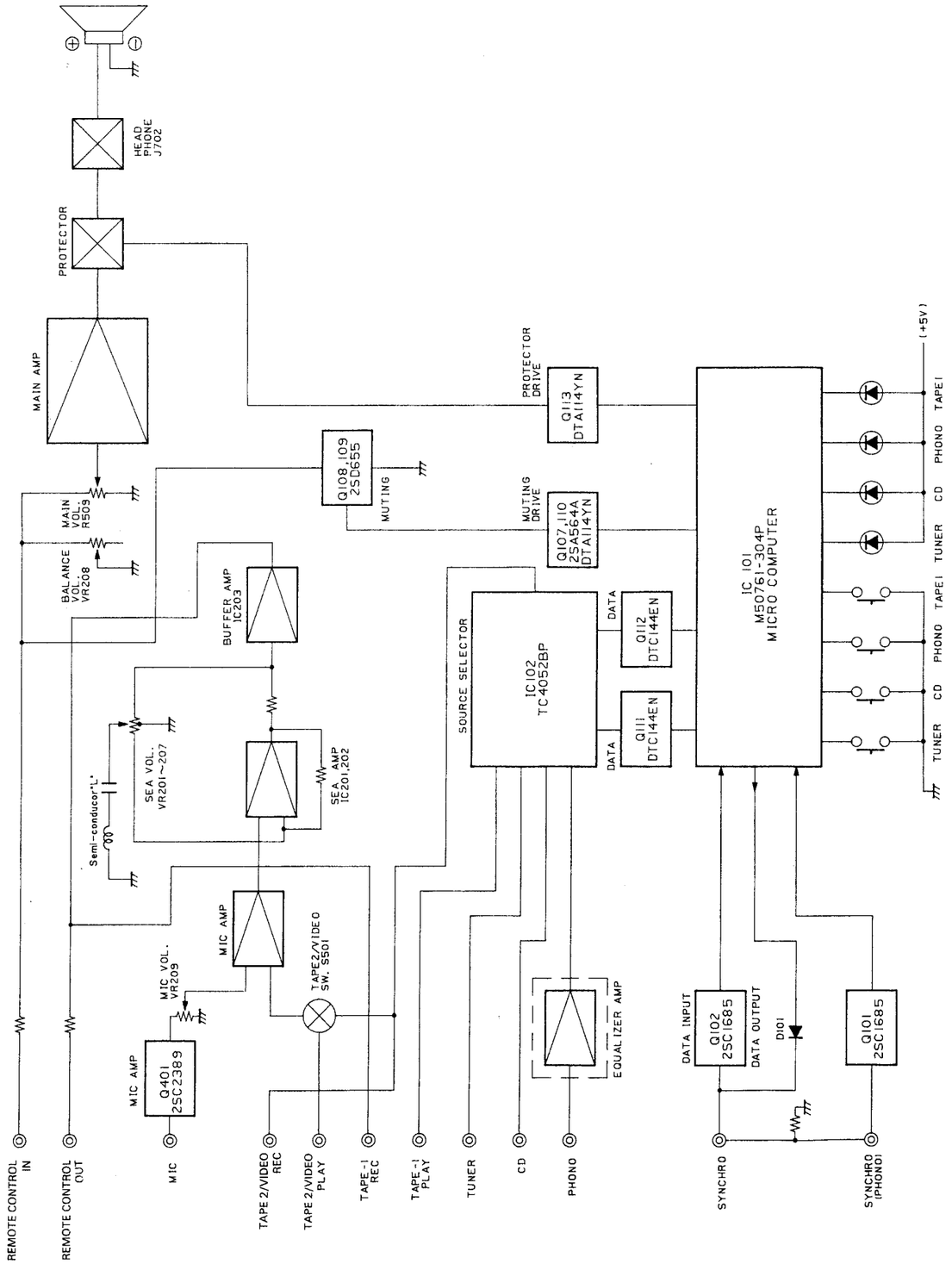
■ **Removing the Volume PC Board**

1. Remove the front panel.
2. Pull out the volume knob ❼.
3. Take off the lugs inserted into the front panel to remove the volume PC board.

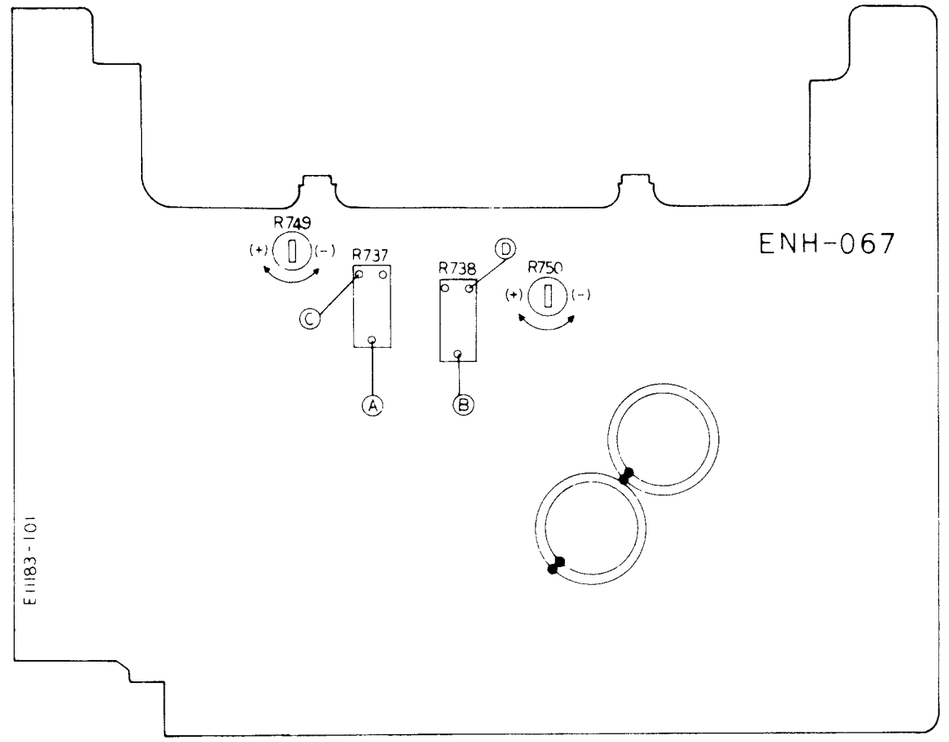
■ **Removing the Bottom Plate**

1. Remove 16 screws (all screws other than the feet) on the bottom surface.
   NOTE:
   Since the screw Ⓐ is fixed together with the bracket of the microphone jack, and the screw Ⓑ is fixed together with the bracket of the power switch, take care when reassembling.

Block Diagram



Adjustment Procedures



Location of adjusting parts

■ Adjusting the idling current

(1) Before turning on the power, fully turn the semi-fixed resistors R749 (L channel) and R750 (R channel) on the power amp PCB counterclockwise.

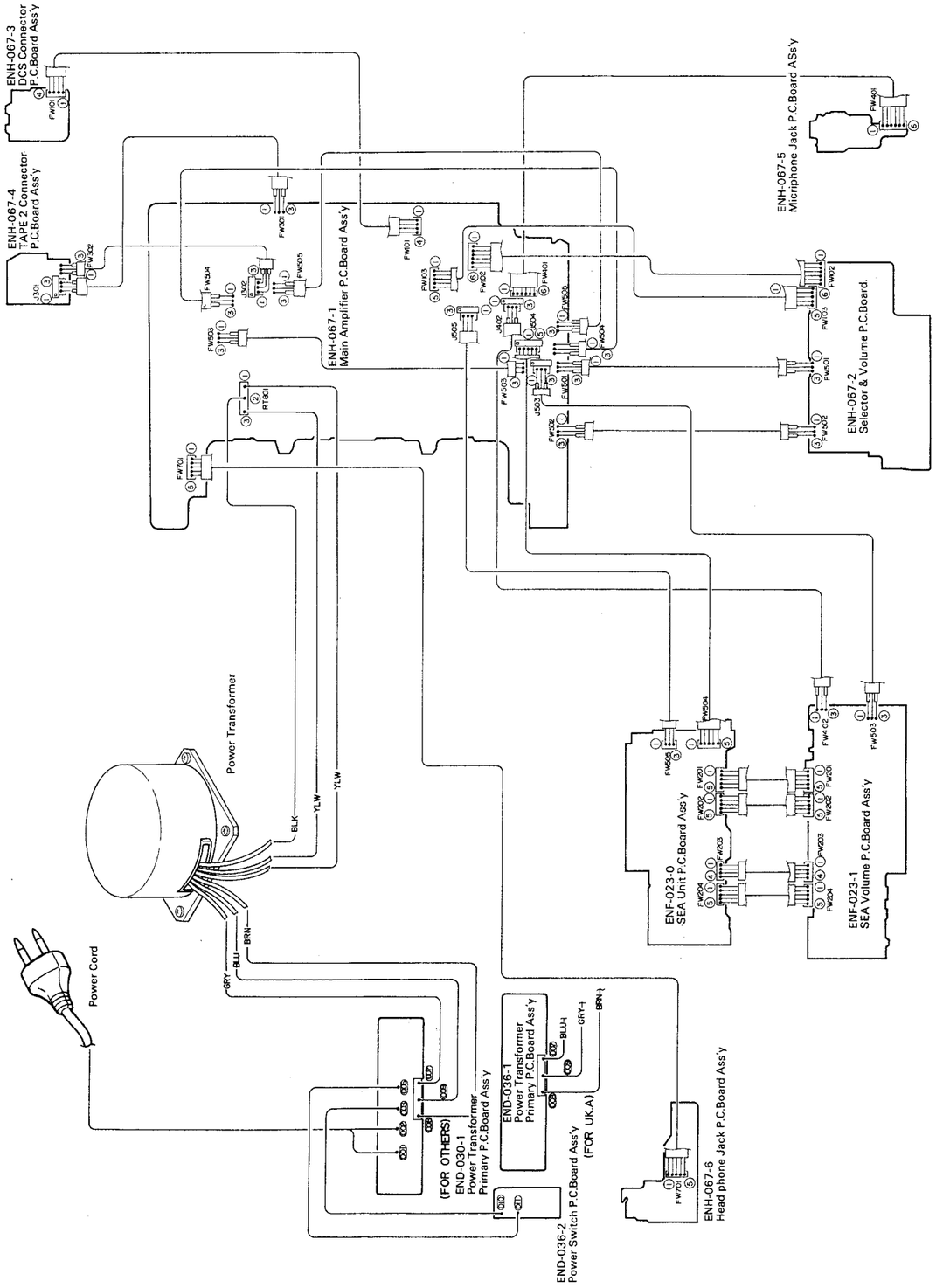
(2) After turning on the power, adjust semi-fixed resistors R749 and R750 so that the potentials between points Ⓐ – Ⓒ of emitter resistor R737 and points Ⓑ – Ⓓ of R738 are within 2.0 – 8.0 mV
L channel: Measure the potential of R737 Ⓒ (emitter of Q719) for R737 Ⓐ).
R channel: Measure the potential of R738 Ⓓ (emitter of Q720) for R738 Ⓑ).

(3) After about 5 minutes and the heatsink becomes warm, adjust R749 and R750 so that the potential between above points is 3 mV. Check that the measured potential does not change even when the heatsink becomes hot.

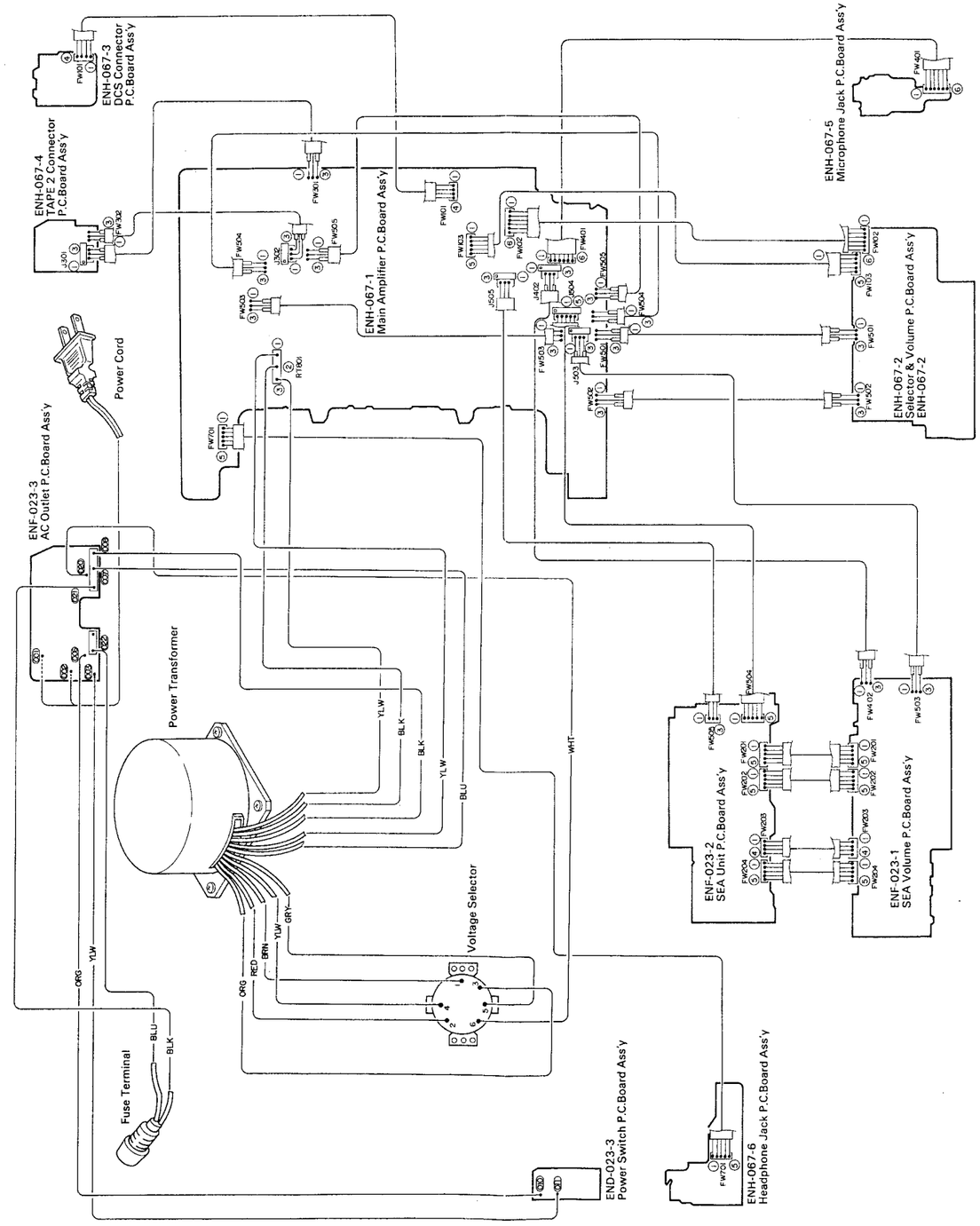
NOTE:
When making this measurement, be sure to move the probes of the measuring instrument and cabinet (metal case) away from the amplifier (AX-E77BK) ground or other measuring instrument ground.

Connection Diagram

■ For BS, E, G, A

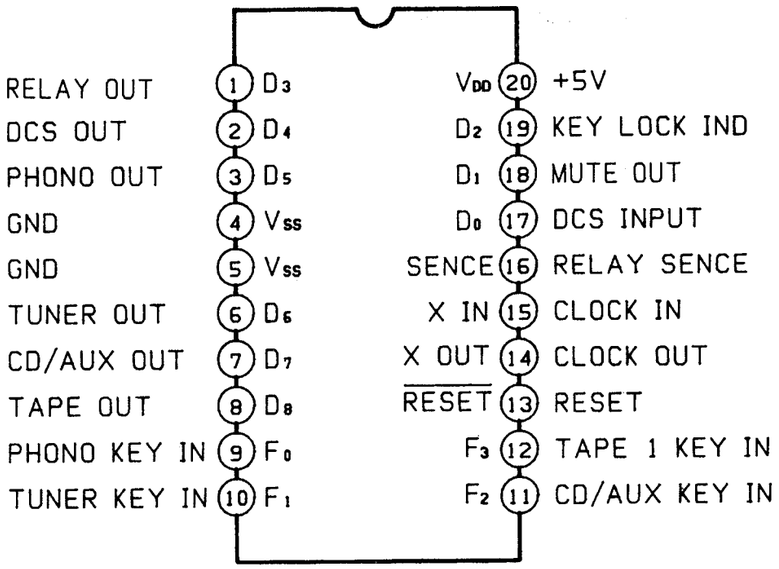


■ For U.S. Military Market and Other Countries



Guidance to Repairing

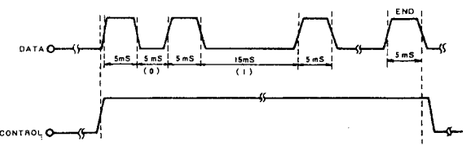
■ IC101 (M50761-304P) Pin Functions


RELAY OUT 1 D3
DCS OUT 2 D4
PHONO OUT 3 D5
GND 4 Vss
GND 5 Vss
TUNER OUT 6 D6
CD/AUX OUT 7 D7
TAPE OUT 8 D8
PHONO KEY IN 9 F0
TUNER KEY IN 10 F1
VDD 20 +5V
D2 19 KEY LOCK IND
D1 18 MUTE OUT
D0 17 DCS INPUT
SENCE 16 RELAY SENCE
X IN 15 CLOCK IN
X OUT 14 CLOCK OUT
RESET 13 RESET
F3 12 TAPE 1 KEY IN
F2 11 CD/AUX KEY IN

■ Data Transmission Method

Two types of DCS are provided. One is the SYNCHRO PLAYER terminal (2.5 mm dia) exclusively for the AL-E33BK the other is the SYNCHROterminal (3.5 mm dia) for other equipment (FX-E77BK etc.)
When the PLAY button is pressed on the turntable, the SYNCHRO terminal exclusively for the turntable (AL-E33BK) becomes "H" level of about 5V.
The SYNCHRO terminal (3.5 mm dia), connected via the common bus line to the other equpment, handles two-way data excange by bollowing data transmission method.

Transimitted data



1-word/1-command structure

Start	b7	b6	b5	b4	b3	b2	b1	b0

Unit code — Data key code — Data code

$b_4 = 0$ Operation Code
$b_4 = 1$ Station number or tune number code (not used in this model)

■ Signal Code List

● Code list 1 : $b_4 = 0$ (OP = Optional)

(A) DECK

Hexadecimal	Data code				Function	Key input with same meaning
0	0	0	0	0	———	———
1	0	0	0	1	PLAY status set	PLAY
2	0	0	1	0	STOP status set ["STOP (I)" signal]	STOP
6	0	1	1	0	REC PLUSE set after 4-sec, REC MUTE	REC MUTE PAUSE
9	1	0	0	0	REC PLAY status set	REC · PLAY
E	1	1	1	0	STOP status set only during PLAY	——— "STOP (II)" signal

(B) TURNTABLE

Hexadecimal	Data code				Function	Key input with same meaning
6	0	1	1	0	Tonearm returns to arm rest and turntable STOP status set	——— (ALL STOP)
7	0	1	1	1	"START"	
9	1	0	0	1	Deck saves recording-discontinued signal	——— (NON REC)
A	1	0	1	0	Saves the signal when the deck enters from the mode other than rec to REC PAUSE mode.	——— (REC · PAUSE)

(C) AMPLIFIER

Hexadecimal	Data code				Function	Key input with same meaning
0	0	0	0	0	———	———
1	0	0	0	1	SOURCE switched to PHONO	
3	0	0	1	1	SOURCE switched to CD/AUX	CD/AUX
4	0	1	0	0	SOURCE switched to TAPE-1	TAPE-1
9	1	0	0	0	——— Edit-recording start signal	———
A	1	0	1	0	SOURCE returned to previous setting [REC (SOURCE)]	——— "REC (SOURCE)"

(D) TUNER

Hexadecimal	Data code				Function	Key input with same meaning
0	0	0	0	0	Cancellation of audio muting of TUNER	———

(E) CD PLAYER

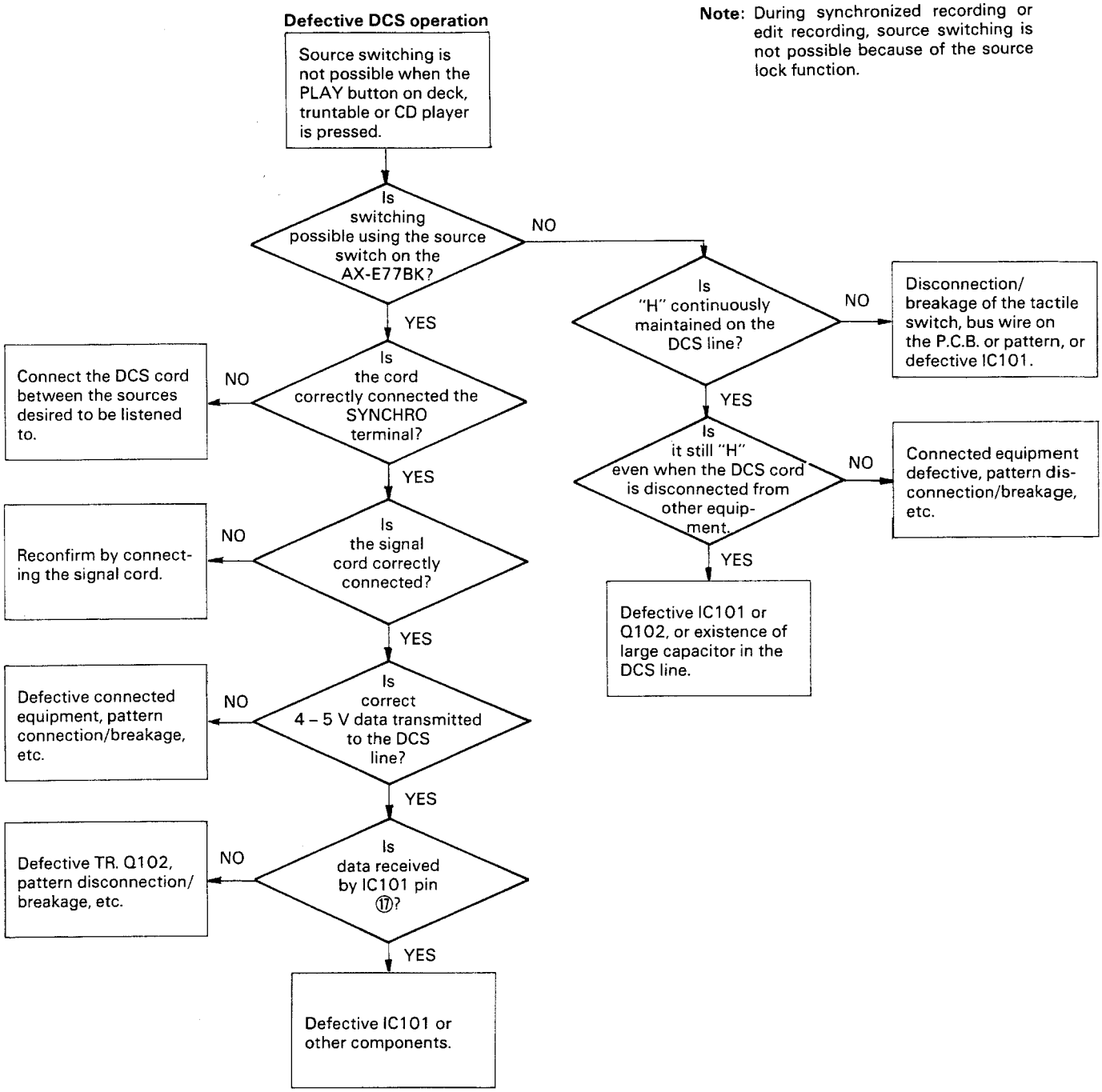
Hexadecimal	Data code				Function	Key input with same meaning
1	0	0	0	1	PLAY status set	———

● Code list

	Unit code			
0	0	0	0	———
1	0	0	1	DECK
2	0	1	0	CD PLAYER
4	1	0	0	TURNTABLE
5	1	0	1	AMPLIFIER
8	1	1	1	TUNER

As the SYNCHRO terminal uses a common bus line with all equipment as shown in the tables above, the or der of connection of equipment poses no problem.
The SYNCHRO terminal is not connected to GROUND; because of this, DCS does not function when signal codes are not continuously transmitted between the equipment.

■ Troubleshooting


Defective DCS operation
Source switching is not possible when the PLAY button on deck, truntable or CD player is pressed.
Is switching possible using the source switch on the AX-E77BK?
NO
YES
Is "H" continuously maintained on the DCS line?
NO
Disconnection/ breakage of the tactile switch, bus wire on the P.C.B. or pattern, or defective IC101.
YES
Is it still "H" even when the DCS cord is disconnected from other equip-ment.
NO
Connected equipment defective, pattern dis-connection/breakage, etc.
YES
Defective IC101 or Q102, or existence of large capacitor in the DCS line.
Is the cord correctly connected the SYNCHRO terminal?
NO
Connect the DCS cord between the sources desired to be listened to.
YES
Is the signal cord correctly connected?
NO
Reconfirm by connect-ing the signal cord.
YES
Is correct 4 – 5 V data transmitted to the DCS line?
NO
Defective connected equipment, pattern connection/breakage, etc.
YES
Is data received by IC101 pin ⑰?
NO
Defective TR. Q102, pattern disconnection/ breakage, etc.
YES
Defective IC101 or other components.

Note: During synchronized recording or edit recording, source switching is not possible because of the source lock function.

When DCS is defective as shown in the above example, check if signals are output on the DCS data line.

(Simplified check method)

Apply probes of the tester (for voltage measurement) between the SYNCHRO terminal and the ground, and press the button of the equipment ot be checked then check if the tester needle moves with a momentary shaking motion.

PARTS LIST

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■ ENF-023 □ SEA/AC Outlet P.C. Board Ass'y 2-10
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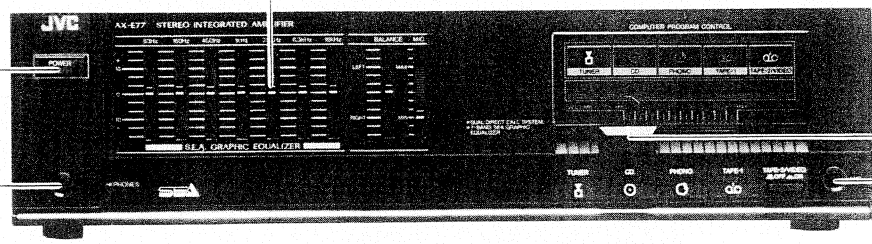
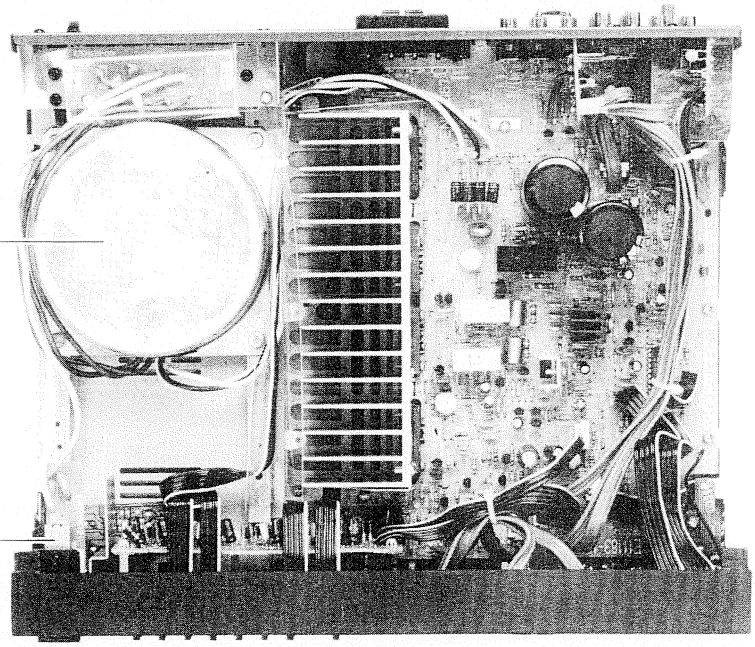
Main Parts Locations

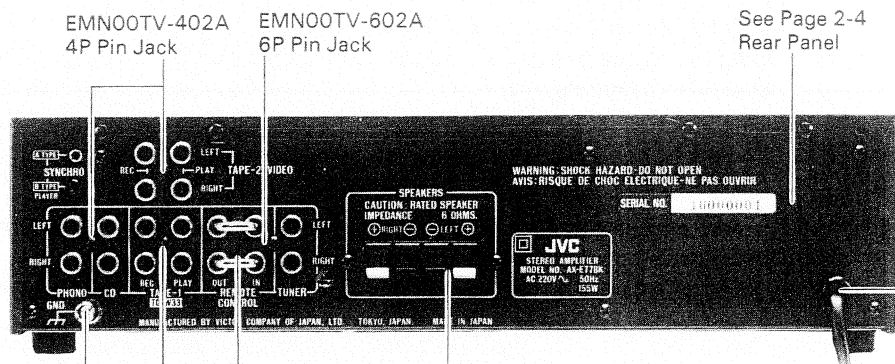
■ Front View



■ Top View

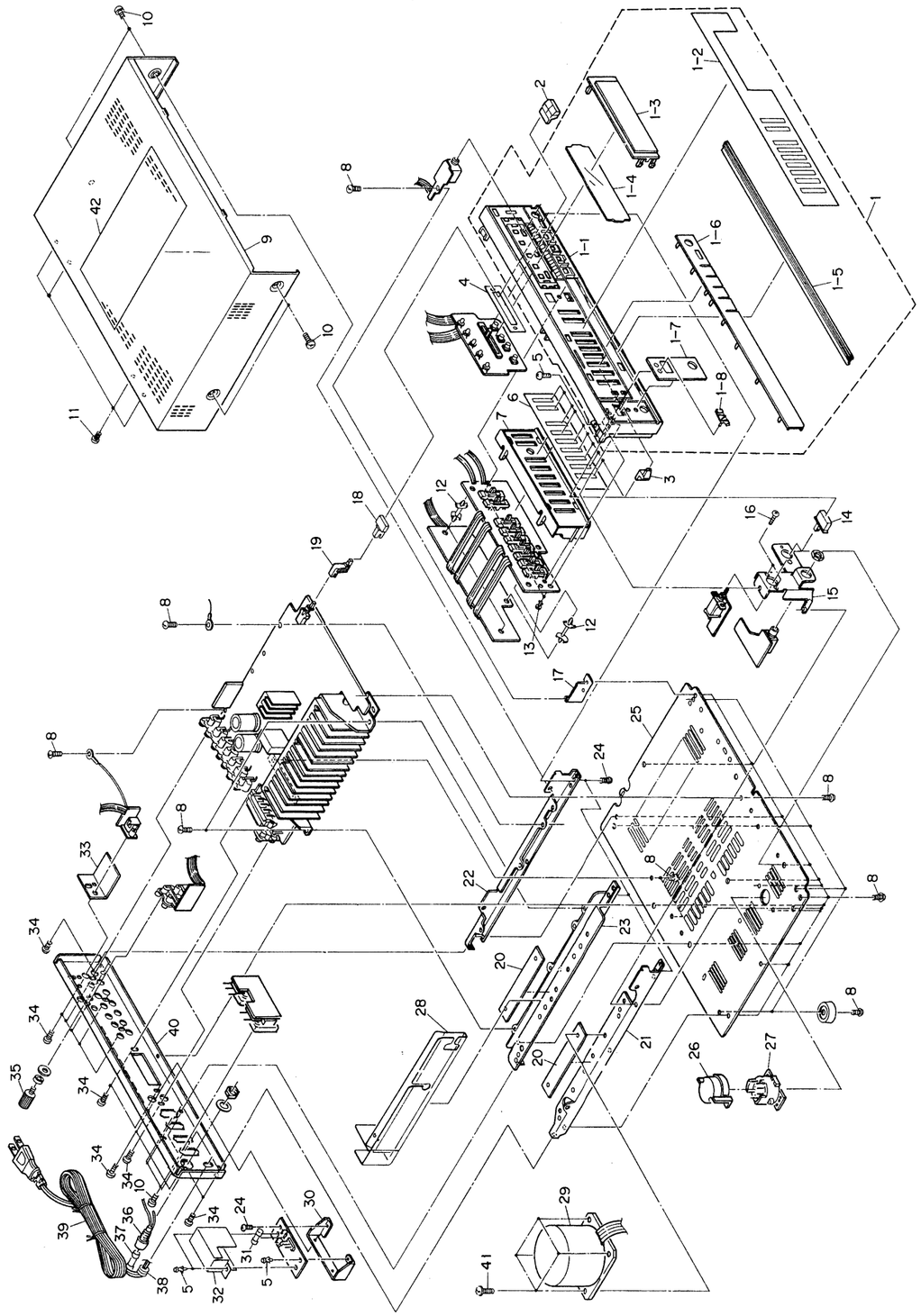


■ Rear View



⚠ : Safety Parts

Exploded View and Part List



⚠	Item No.	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-AXE77BKE	Front Panel Ass'y	1		
	1-1	E11186-001	Front Panel	1		
	1-2	E25117-004	Front Plate	1		
	1-3	E303904-001	Window	1		
	1-4	E303910-003	Screen	1		
	1-5	E72441-001	Fitting	1		
	1-6	E25125-004	Operation Plate	1		
	1-7	E303902-001	Ornament	1		
	1-8	E70912-001	JVC Mark	1		
	2	E72450-001	Volume Knob	1		
	3	E72451-001	Slide Knob	9		
	4	E72662-001	Mask Plate	1		
	5	E48729-008	Plastic Rivet	4		
	6	E303923-001	SEA Sheet	1		
	7	E25143-001	SEA Escutcheon	1		
	8	SBSB3008N	Screw	26		
	9	E25141-002	Metal Cover	1		U,P,PG,A,G
		E25141-003	Metal Cover	1		BS
		E25141-004	Metal Cover	1		E
	10	SDSB3008M	Screw	8		
	11	SHSB3008M	Screw	4		
	12	E300796-001	Fastener	3		
	14	E303883-001	Push Button	1		
	15	E303907-001	Switch Bracket	1		
	16	SBST3006Z	Screw	2		
	17	E72452-001	Mic Bracket	1		
	18	E72468-001	Push Button	1		
	19	E72470-001	Push Shaft	1		
	20	E72647-001	Spacer	2		
	21	E303920-001	Side Bracket	1		
	22	E303921-001	Side Bracket	1		
	23	E303922-001	Center Bracket	1		
	24	SBSF3008Z	Screw	4		
	25	E25150-006	Botton Plate	1		Except U,P,PG
		E25150-007	Botton Plate	1		U,P,PG
	26	E302764-001	Voltage Selector Cover	1		U,P,PG
⚠	27	QSR0085-007	Voltage Selector	1		U,P,PG
	28	E303992-001	Proteector	1		
⚠	29	ETP4200-02FA	Power Transformer	1		U,P,PG
⚠		ETP4200-02EA	Power Transformer	1		E,A,G
⚠		ETP4200-02EABS	Power Transformer	1		BS
	30	E71074-002	Bracket	1		E,G,A,BS
⚠	31	QMF51A2-2R5S	Fuse	1		E,A,G
⚠		QMF51E2-2R5SBS	Fuse	1		BS
	32	E72922-001	Cover	1		
	33	E72502-001	Slide Bracket	1		
	34	SBSB3008M	Screw	13		
	35	E70078-001	GND. Terminal	1		
	36	QMG0301-003	Fuse Holder	1		U,P,PG
⚠	37	QMF51A2-2R5S	Fuse	1		U,PG
⚠		QMF51A2-5R0S	Fuse	1		P
⚠	38	QHS3876-162	Cord Stopper	1		Except BS
⚠		QHS3876-162BS	Cord Stopper	1		BS
⚠	39	QMP7600-250	Power Cord	1		U,P,PG
⚠		QMP3900-200	Power Cord	1		E,G
⚠		QMP2560-244	Power Cord	1		A
⚠		QMP9017-008BS	Power Cord	1		BS
	40	E25133-008	Rear Panel	1		U,P,PG
		E25133-009	Rear Panel	1		E,G
		E25133-010	Rear Panel	1		A,BS

⚠: Safety Parts

⚠	Item No.	Part Number	Part Name	Q'ty	Description	Areas
	41	E65389-004	Screw	4		
	42	E304239-001	Protect Sheet	1		E

⚠: Safety Parts

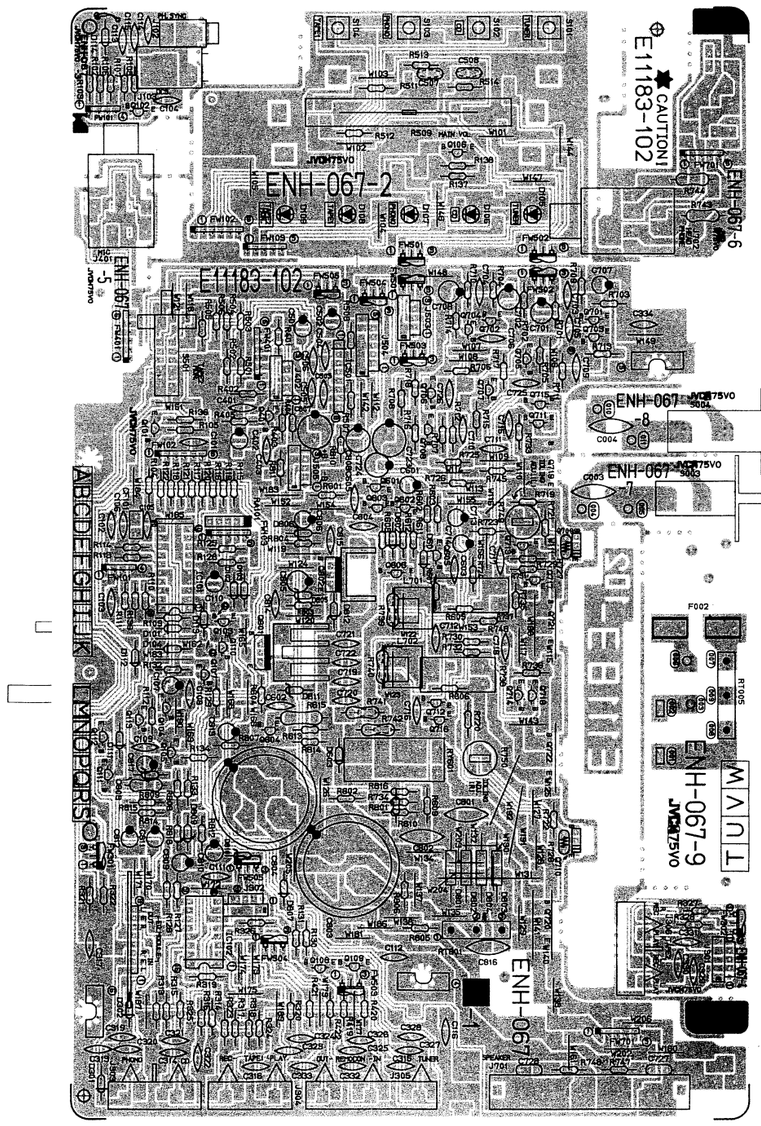
The Marks for Designated Areas
E ..... Europe
A ..... Australia
G ..... West Germany
BS ..... U.K.
P, PG ..... U.S. Military Market
U ..... Other Countries
No marks indicates all areas.

Printed Circuit Board Ass'y and Parts List

■ ENH-067 □ Amplifier P.C. Board Ass'y

Note: ENH-067 □ Varies according to the areas employed. See note (1) when placing an order.
Note (1)

P.C. Board Ass'y	Designated Areas
ENH-067 D	U.S. Military Market & Other Countries
ENH-067 E	Europe, U.K. & Australia
ENH-067 F	West Germany



⚠	Item No.	Part Number	Part Name	Q'ty	Description	Areas
	41	E65389-004	Screw	4		
	42	E304239-001	Protect Sheet	1		E

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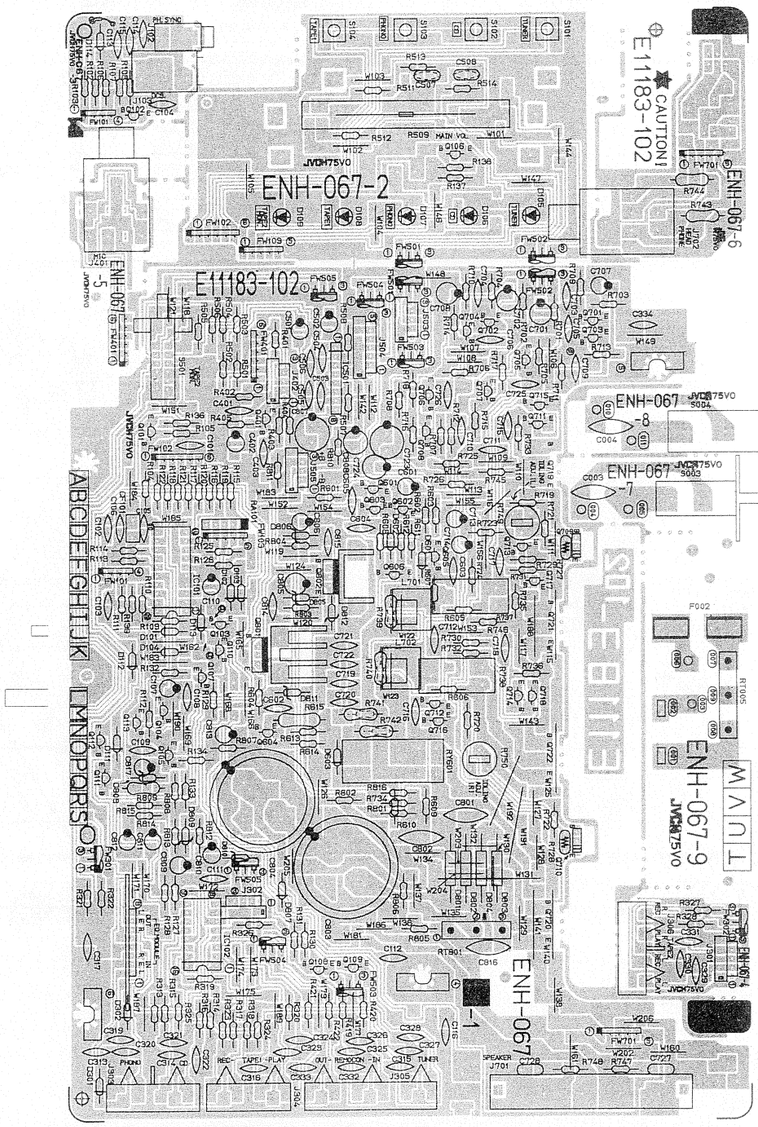
ENH-067 F	West Germany



TRANSITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	Q101	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q102	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q103	DTA114YN	SILICON	ROHM	
	Q104	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q105	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q106	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q107	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q108	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q109	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q110	DTA114YN	SILICON	ROHM	
	Q111	DTC144EN	SILICON	ROHM	
	Q112	DTC144EN	SILICON	ROHM	
	Q113	DTA114YN	SILICON	ROHM	
	Q401	2SC2389(S,E)	SILICON	ROHM	
	Q601	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q602	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q603	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q604	2SC2389(S,E)	SILICON	ROHM	
	Q605	2SC2389(S,E)	SILICON	ROHM	
	Q606	2SC2389(S,E)	SILICON	ROHM	
	Q701	2SC2240(A,B)	SILICON	TOSHIBA	
	Q702	2SC2240(A,B)	SILICON	TOSHIBA	
	Q703	2SC2240(A,B)	SILICON	TOSHIBA	
	Q704	2SC2240(A,B)	SILICON	TOSHIBA	
	Q705	2SA1038(S,E)	SILICON	ROHM	
	Q706	2SA1038(S,E)	SILICON	ROHM	
	Q707	2SA1038(S,E)	SILICON	ROHM	
	Q708	2SA1038(S,E)	SILICON	ROHM	
	Q709	2SD636(Q,R)	SILICON	MATSUSHITA	
	Q710	2SD636(Q,R)	SILICON	MATSUSHITA	
	Q711	2SC2389(S,E)	SILICON	ROHM	
	Q712	2SC2389(S,E)	SILICON	ROHM	
	Q713	2SA1038(S,E)	SILICON	ROHM	
	Q714	2SA1038(S,E)	SILICON	ROHM	
	Q715	2SC2235(O,Y)	SILICON	TOSHIBA	
	Q716	2SC2235(O,Y)	SILICON	TOSHIBA	
	Q717	2SA965(O,Y)	SILICON	TOSHIBA	
	Q718	2SA965(O,Y)	SILICON	TOSHIBA	
	Q719	2SD845LB(O,R)	SILICON	TOSHIBA	
	Q720	2SD845LB(O,R)	SILICON	TOSHIBA	
	Q721	2SB755LB(O,R)	SILICON	TOSHIBA	
	Q722	2SB755LB(O,R)	SILICON	TOSHIBA	
	Q801	2SD1266(P,Q)	SILICON	MATSUSHITA	
	Q802	2SB507V(D,E)	SILICON	SANYO	

⚠ : SAFETY PARTS

I. C. S

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC101	M50761-304P	I.C.	MITSUBISHI	
	IC102	TC4052BP	I.C.	TOSHIBA	
	IC501	M5218L-R	I.C.	MITSUBISHI	

⚠ : SAFETY PARTS

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D101	1S2473	SILICON	ROHM	
	D102	1S2473	SILICON	ROHM	
	D103	1S2473	SILICON	ROHM	
	D104	1S2473	SILICON	ROHM	
	D105	SLR-55DC50F	L.E.D.	ROHM	
	D106	SLR-55DC50F	L.E.D.	ROHM	
	D107	SLR-55DC50F	L.E.D.	ROHM	
	D108	SLR-55DC50F	L.E.D.	ROHM	
	D109	SLR-55VC50F	L.E.D.	ROHM	
	D111	1S2473	SILICON	ROHM	
	D112	1S2473	SILICON	ROHM	
	D113	1S2473	SILICON	ROHM	
	D114	1S2473	SILICON	ROHM	
	D601	1S2473	SILICON	ROHM	
	D602	1S2473	SILICON	ROHM	
	D603	1S2473	SILICON	ROHM	
	D801	30DL2FC	SILICON	NIHONINTER	
	D802	30DL2FC	SILICON	NIHONINTER	
	D803	30DL2FC	SILICON	NIHONINTER	
	D804	30DL2FC	SILICON	NIHONINTER	
	D805	RD15EB3	ZENER	NEC	
	D806	RD15EB3	ZENER	NEC	
	D807	1S2473	SILICON	ROHM	
	D808	RD5.1EB2	ZENER	NEC	
	D809	RD9.1EB3	ZENER	NEC	
	D810	RD9.1EB3	ZENER	NEC	
	D811	RD16EB3	ZENER	NEC	
	D812	RD16EB3	ZENER	NEC	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C104	QCF21HP-103	0.01MF	50V	CERAMIC	
	C105	QCS21HJ-151	150PF	50V	CERAMIC	
	C106	QCS21HJ-151	150PF	50V	CERAMIC	
	C107	QETB1HM-225	2.2MF	50V	ELECTRO	
	C108	QCF21HP-103	0.01MF	50V	CERAMIC	
	C109	QCF21HP-103	0.01MF	50V	CERAMIC	
	C110	QETB1EM-106	10MF	25V	ELECTRO	
	C111	QCF21HP-103	0.01MF	50V	CERAMIC	
	C113	QCS21HJ-101	100PF	50V	CERAMIC	
	C114	QCF21HP-103	0.01MF	50V	CERAMIC	
	C115	QCF21HP-473	0.047MF	50V	CERAMIC	
	C313	QCF21HP-223	0.022MF	50V	CERAMIC	
	C314	QCF21HP-103	0.01MF	50V	CERAMIC	
	C315	QCF21HP-103	0.01MF	50V	CERAMIC	
	C316	QCF21HP-103	0.01MF	50V	CERAMIC	
	C317	QCF21HP-103	0.01MF	50V	CERAMIC	
	C329	QCS21HJ-101	100PF	50V	CERAMIC	
	C331	QCS21HJ-101	100PF	50V	CERAMIC	
	C332	QCF21HP-103	0.01MF	50V	CERAMIC	
	C333	QCF21HP-103	0.01MF	50V	CERAMIC	
	C401	QCS21HJ-221	220PF	50V	CERAMIC	
	C402	QETB1EM-106	10MF	25V	ELECTRO	
	C403	QCS21HJ-101	100PF	50V	CERAMIC	
	C501	QETB1EM-106	10MF	25V	ELECTRO	
	C502	QETB1EM-106	10MF	25V	ELECTRO	
	C503	QCS21HJ-100	10PF	50V	CERAMIC	
	C504	QCS21HJ-100	10PF	50V	CERAMIC	
	C505	QCS21HJ-101	100PF	50V	CERAMIC	
	C506	QCS21HJ-101	100PF	50V	CERAMIC	
	C601	QETB1AM-476	47MF	10V	ELECTRO	
	C602	QCF21HP-103	0.01MF	50V	CERAMIC	
	C603	QCF21HP-103	0.01MF	50V	CERAMIC	
	C604	QCF21HP-103	0.01MF	50V	CERAMIC	
	C605	QCF21HP-103	0.01MF	50V	CERAMIC	
	C701	QETB1HM-475	4.7MF	50V	ELECTRO	
	C702	QETB1HM-475	4.7MF	50V	ELECTRO	
	C703	QCS21HJ-100	10PF	50V	CERAMIC	
	C704	QCS21HJ-100	10PF	50V	CERAMIC	
	C705	QCS21HJ-101	100PF	50V	CERAMIC	
	C706	QCS21HJ-101	100PF	50V	CERAMIC	
	C707	QETB1AM-107	100MF	10V	ELECTRO	
	C708	QETB1AM-107	100MF	10V	ELECTRO	
	C709	QCS21HJ-220	22PF	50V	CERAMIC	
	C710	QCS21HJ-220	22PF	50V	CERAMIC	
	C711	QCF21HP-103	0.01MF	50V	CERAMIC	
	C712	QCF21HP-103	0.01MF	50V	CERAMIC	
	C713	QETB1HM-226	22MF	50V	ELECTRO	
	C714	QETB1HM-226	22MF	50V	ELECTRO	
	C715	QCS21HJ-470	47PF	50V	CERAMIC	
	C716	QCS21HJ-470	47PF	50V	CERAMIC	
	C717	QCS21HJ-470	47PF	50V	CERAMIC	
	C718	QCS21HJ-470	47PF	50V	CERAMIC	
	C719	QFN81HK-473	0.047MF	50V	MYLAR	
	C720	QFN81HK-473	0.047MF	50V	MYLAR	
	C721	QFN81HK-473	0.047MF	50V	MYLAR	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C722	QFN81HK-473	0.047MF	50V	MYLAR	
	C723	QETB1HM-227	220MF	50V	ELECTRO	
	C725	QCS21HJ-390	39PF	50V	CERAMIC	
	C726	QCS21HJ-390	39PF	50V	CERAMIC	
	C727	QCF21HP-103	0.01MF	50V	CERAMIC	F
	C728	QCF21HP-103	0.01MF	50V	CERAMIC	F
	C801	EFZ0091-103	0.01MF	630V	ELECTRO	
	C803	QEZ0074-878E	8700MF	50V	ELECTRO	
	C804	QEZ0074-878E	8700MF	50V	NON POLE	
	C805	QETB1EM-476	47MF	25V	ELECTRO	
	C806	QETB1EM-476	47MF	25V	ELECTRO	
	C807	QETB1CM-477	470MF	16V	ELECTRO	
	C808	QETB1CM-107	100MF	16V	ELECTRO	
	C809	QETB1CM-476	47MF	16V	ELECTRO	
	C810	QETB1CM-476	47MF	16V	ELECTRO	
	C811	QETB1CM-476	47MF	16V	ELECTRO	
	C812	QETB1CM-476	47MF	16V	ELECTRO	
	C813	QETB1HM-225	2.2MF	50V	ELECTRO	
	C814	QCF21HP-103	0.01MF	50V	CERAMIC	
	C815	QCF21HP-103	0.01MF	50V	CERAMIC	
	C817	QETB1AM-107	100MF	10V	ELECTRO	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R102	QRD148J-100S	10	1/4W	CARBON	
	R103	QRD148J-101S	100	1/4W	CARBON	
	R104	QRD148J-104S	100K	1/4W	CARBON	
	R105	QRD148J-473S	47K	1/4W	CARBON	
	R106	QRD148J-101S	100	1/4W	CARBON	
	R107	QRD148J-473S	47K	1/4W	CARBON	
	R108	QRD148J-473S	47K	1/4W	CARBON	
	R109	QRD148J-102S	1K	1/4W	CARBON	
	R110	QRD148J-222S	2.2K	1/4W	CARBON	
	R111	QRD148J-103S	10K	1/4W	CARBON	
	R112	QRD148J-103S	10K	1/4W	CARBON	
	R113	QRD148J-105S	1M	1/4W	CARBON	
	R114	QRD148J-332S	3.3K	1/4W	CARBON	
	R115	QRD148J-103S	10K	1/4W	CARBON	
	R116	QRD148J-103S	10K	1/4W	CARBON	
	R117	QRD148J-103S	10K	1/4W	CARBON	
	R118	QRD148J-103S	10K	1/4W	CARBON	
	R119	QRD148J-103S	10K	1/4W	CARBON	
	R120	QRD148J-103S	10K	1/4W	CARBON	
	R121	QRD148J-103S	10K	1/4W	CARBON	
	R122	QRD148J-103S	10K	1/4W	CARBON	
	R125	QRD148J-223S	22K	1/4W	CARBON	
	R126	QRD148J-223S	22K	1/4W	CARBON	
	R127	QRD148J-223S	22K	1/4W	CARBON	
	R128	QRD148J-223S	22K	1/4W	CARBON	
	R129	QRD148J-473S	47K	1/4W	CARBON	
	R130	QRD148J-104S	100K	1/4W	CARBON	
	R131	QRD148J-104S	100K	1/4W	CARBON	
	R132	QRD148J-473S	47K	1/4W	CARBON	
	R133	QRD148J-103S	10K	1/4W	CARBON	
	R134	QRD148J-103S	10K	1/4W	CARBON	
	R136	QRD148J-331S	330	1/4W	CARBON	
	R137	QRD148J-151S	150	1/4W	CARBON	
	R138	QRD148J-332S	3.3K	1/4W	CARBON	
	R139	QRD148J-103S	10K	1/4W	CARBON	
	R315	QRD148J-102S	1K	1/4W	CARBON	
	R316	QRD148J-102S	1K	1/4W	CARBON	
	R317	QRD148J-222S	2.2K	1/4W	CARBON	
	R318	QRD148J-222S	2.2K	1/4W	CARBON	
	R319	QRD148J-153S	15K	1/4W	CARBON	
	R320	QRD148J-153S	15K	1/4W	CARBON	
	R321	QRD148J-564S	560K	1/4W	CARBON	
	R322	QRD148J-564S	560K	1/4W	CARBON	
	R323	QRD148J-472S	4.7K	1/4W	CARBON	
	R324	QRD148J-472S	4.7K	1/4W	CARBON	
	R325	QRD148J-102S	1K	1/4W	CARBON	
	R326	QRD148J-102S	1K	1/4W	CARBON	
	R327	QRD148J-102S	1K	1/4W	CARBON	
	R328	QRD148J-102S	1K	1/4W	CARBON	
	R401	QRD148J-102S	1K	1/4W	CARBON	
	R402	QRD148J-103S	10K	1/4W	CARBON	
	R403	QRD148J-105S	1M	1/4W	CARBON	
	R404	QRD148J-103S	10K	1/4W	CARBON	
	R405	QRD148J-121S	120	1/4W	CARBON	
	R419	QRD148J-272S	2.7K	1/4W	CARBON	

⚠ : SAFETY PARTS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R420	QRD148J-272S	2.7K	1/4W	CARBON	
	R421	QRD148J-222S	2.2K	1/4W	CARBON	
	R422	QRD148J-222S	2.2K	1/4W	CARBON	
	R501	QRD148J-182S	1.8K	1/4W	CARBON	
	R502	QRD148J-182S	1.8K	1/4W	CARBON	
	R503	QRD148J-823S	82K	1/4W	CARBON	
	R504	QRD148J-823S	82K	1/4W	CARBON	
	R505	QRD148J-823S	82K	1/4W	CARBON	
	R506	QRD148J-823S	82K	1/4W	CARBON	
	R507	QRD148J-393S	39K	1/4W	CARBON	
	R508	QRD148J-393S	39K	1/4W	CARBON	
	R509	QVTB01A-EF5C			VARIABLE	
	R601	QRD148J-334S	330K	1/4W	CARBON	
	R602	QRD148J-562S	5.6K	1/4W	CARBON	
	R603	QRD148J-683S	68K	1/4W	CARBON	
	R604	QRD148J-103S	10K	1/4W	CARBON	
	R605	QRD148J-222S	2.2K	1/4W	CARBON	
	R606	QRD148J-222S	2.2K	1/4W	CARBON	
	R607	QRD148J-102S	1K	1/4W	CARBON	
	R608	QRD148J-102S	1K	1/4W	CARBON	
	R609	QRD148J-181S	180	1/4W	CARBON	
	R610	QRD148J-181S	180	1/4W	CARBON	
	R611	QRD148J-104S	100K	1/4W	CARBON	
	R612	QRD148J-823S	82K	1/4W	CARBON	
⚠	R613	QRD145J-152S	1.5K	1/4W	UNF.CARBON	
⚠	R614	QRD145J-152S	1.5K	1/4W	UNF.CARBON	
	R701	QRD148J-222S	2.2K	1/4W	CARBON	
	R702	QRD148J-222S	2.2K	1/4W	CARBON	
	R703	QRD148J-473S	47K	1/4W	CARBON	
	R704	QRD148J-473S	47K	1/4W	CARBON	
	R705	QRD148J-102S	1K	1/4W	CARBON	
	R706	QRD148J-102S	1K	1/4W	CARBON	
⚠	R707	QRD145J-330S	33	1/4W	UNF.CARBON	
⚠	R708	QRD145J-330S	33	1/4W	UNF.CARBON	
	R709	QRD148J-822S	8.2K	1/4W	CARBON	
	R710	QRD148J-822S	8.2K	1/4W	CARBON	
	R711	QRD148J-473S	47K	1/4W	CARBON	
	R712	QRD148J-473S	47K	1/4W	CARBON	
	R713	QRD148J-301S	300	1/4W	CARBON	
	R714	QRD148J-301S	300	1/4W	CARBON	
	R715	QRD148J-152S	1.5K	1/4W	CARBON	
	R716	QRD148J-152S	1.5K	1/4W	CARBON	
	R717	QRD148J-433S	43K	1/4W	CARBON	
	R718	QRD148J-433S	43K	1/4W	CARBON	
	R719	QRD148J-332S	3.3K	1/4W	CARBON	
	R720	QRD148J-332S	3.3K	1/4W	CARBON	
	R721	QRD148J-102S	1K	1/4W	CARBON	
	R722	QRD148J-102S	1K	1/4W	CARBON	
⚠	R723	QRD145J-472S	4.7K	1/4W	UNF.CARBON	
	R724	QRD148J-472S	4.7K	1/4W	CARBON	
	R725	QRD148J-332S	3.3K	1/4W	CARBON	
	R726	QRD148J-332S	3.3K	1/4W	CARBON	
⚠	R729	QRD145J-272S	2.7K	1/4W	UNF.CARBON	
⚠	R730	QRD145J-272S	2.7K	1/4W	UNF.CARBON	
⚠	R731	QRD145J-471S	470	1/4W	UNF.CARBON	
⚠	R732	QRD145J-471S	470	1/4W	UNF.CARBON	
⚠	R733	QRZ0061-8R2	8.2	1/4W	FUSIBLE	
⚠	R734	QRZ0061-8R2	8.2	1/4W	FUSIBLE	
⚠	R735	QRZ0061-8R2	8.2	1/4W	FUSIBLE	
⚠	R736	QRZ0061-8R2	8.2	1/4W	FUSIBLE	
	R737	ERF032K-R22	0.22	3W	CEMENT	
	R738	ERF032K-R22	0.22	3W	CEMENT	
⚠	R739	QRD125J-330	33	1/2W	UNF.CARBON	
⚠	R740	QRD125J-330	33	1/2W	UNF.CARBON	
⚠	R741	QRD125J-100	10	1/2W	UNF.CARBON	
⚠	R742	QRD125J-100	10	1/2W	UNF.CARBON	
⚠	R743	QRG012J-331AF	330	1W	O.M.FILM	
⚠	R744	QRG012J-331AF	330	1W	O.M.FILM	
⚠	R745	QRD145J-101S	100	1/4W	UNF.CARBON	
⚠	R746	QRD145J-470S	47	1/4W	UNF.CARBON	
⚠	R747	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R748	QRD145J-100S	10	1/4W	UNF.CARBON	F
	R749	QVZ3501-222			VARIABLE	
	R750	QVZ3501-222			VARIABLE	
⚠	R801	QRZ0062-270	27	1/4W	FUSIBLE	
⚠	R802	QRZ0062-330	33	1/4W	FUSIBLE	
	R803	QRD148J-512S	5.1K	1/4W	CARBON	
	R804	QRD148J-562S	5.6K	1/4W	CARBON	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R805	QRD148J-103S	10K	1/4W	CARBON	
	R806	QRD148J-223S	22K	1/4W	CARBON	
	R807	QRD148J-103S	10K	1/4W	CARBON	
⚠	R808	QRD145J-560S	56	1/4W	UNF.CARBON	
⚠	R809	QRD125J-121	120	1/2W	UNF.CARBON	
	R810	QRD148J-471S	470	1/4W	CARBON	
	R811	QRD148J-471S	470	1/4W	CARBON	
	R812	QRD148J-471S	470	1/4W	CARBON	
	R813	QRD148J-471S	470	1/4W	CARBON	
	R814	QRD148J-331S	330	1/4W	CARBON	
	R815	QRD148J-331S	330	1/4W	CARBON	
⚠	R816	QRZ0062-270	27	1/4W	FUSIBLE	D
⚠	RA101	QRB045J-103	10K	4W	ARRAY	

⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		A41096	TAB	
		ENH-060A	P.C.BOARD Ass'y	D
		ENH-060A	P.C.BOARD Ass'y	E
		ENH-060B	P.C.BOARD ASSY	F
		EWT011-091	TERMINAL WIRE	
		E11183-102	CIRCUIT BOARD	
		E303908-001	STAY BRACKET	
		E303909-001	STAY BRACKET	
		E303929-004	HEAT SINK	

⚠ : SAFETY PARTS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E33754-001	TIE BAND	E
		E70306-001	HEAT SINK	F
		E70859-001	EARTH PLATE	
		E70945-H60B	HEAT SINK	
		SBSB3008CC	SCREW	
		SBSB3008CC	SCREW	
		SBSB3008CC	SCREW	
		SBSB3008Z	SCREW	
		SBSE3012CC	SCREW	
	J102	QMS2501-105	JACK ASSY	
	J103	QMS3501-018	JACK ASSY	
	J301	E04365-003	SOCKET ASSY	
	J302	E04365-003	SOCKET ASSY	
	J303	EMN00TV-402A	PIN JACK ASSY	
	J304	EMN00TV-402A	PIN JACK ASSY	
	J305	EMN00TV-602A	PIN JACK ASSY	
	J306	EMN00TV-402A	PIN JACK ASSY	
	J401	QMS6A20-011	JACK ASSY	
	J402	E04365-003	SOCKET ASSY	
	J503	E04365-003	SOCKET ASSY	
	J504	E04365-005	F.W.SOCKET	
	J505	E04365-003	SOCKET ASSY	
	J701	EMB90YV-401A	SPK.TERMINAL	
	J702	QMS6A20-041	JACK ASSY	
	L701	EQL0001-1R0	INDUCTOR	
	L702	EQL0001-1R0	INDUCTOR	
	S101	ESP0001-011	PUSH SWITCH	
	S102	ESP0001-011	PUSH SWITCH	
	S103	ESP0001-011	PUSH SWITCH	
	S104	ESP0001-011	PUSH SWITCH	
	S501	QST5101-E12	PUSH SWITCH	
	CF101	ECX0000-400KS	RESONATOR	
	RT801	E67764-103	TERMINAL	
	RY601	ESK5D24-218	RELAY	

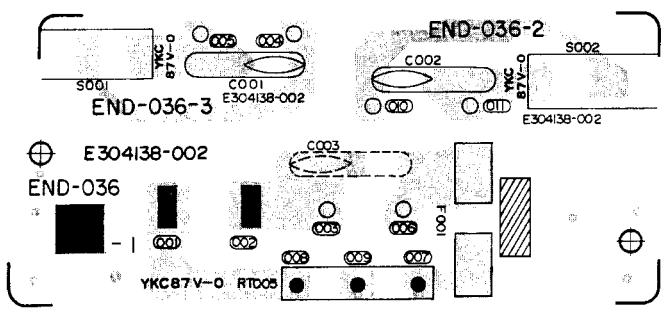
⚠ : SAFETY PARTS

■ END-036 □ Power Supply P.C. Board Ass'y

Note: END-036 □ Varies according to the areas employed. See note (1) when placing an order.

Note (1)

P.C. Board Ass'y	Designated Areas
END-036 A	Europe, Australia & West Germany
END-036 BBS	U.K.



CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C002	QCZ9019-472	4700PF		CERAMIC	A
	C002	QCZ9019-472BS	4700PF		CERAMIC	BBS

⚠ : SAFETY PARTS

OTHERS

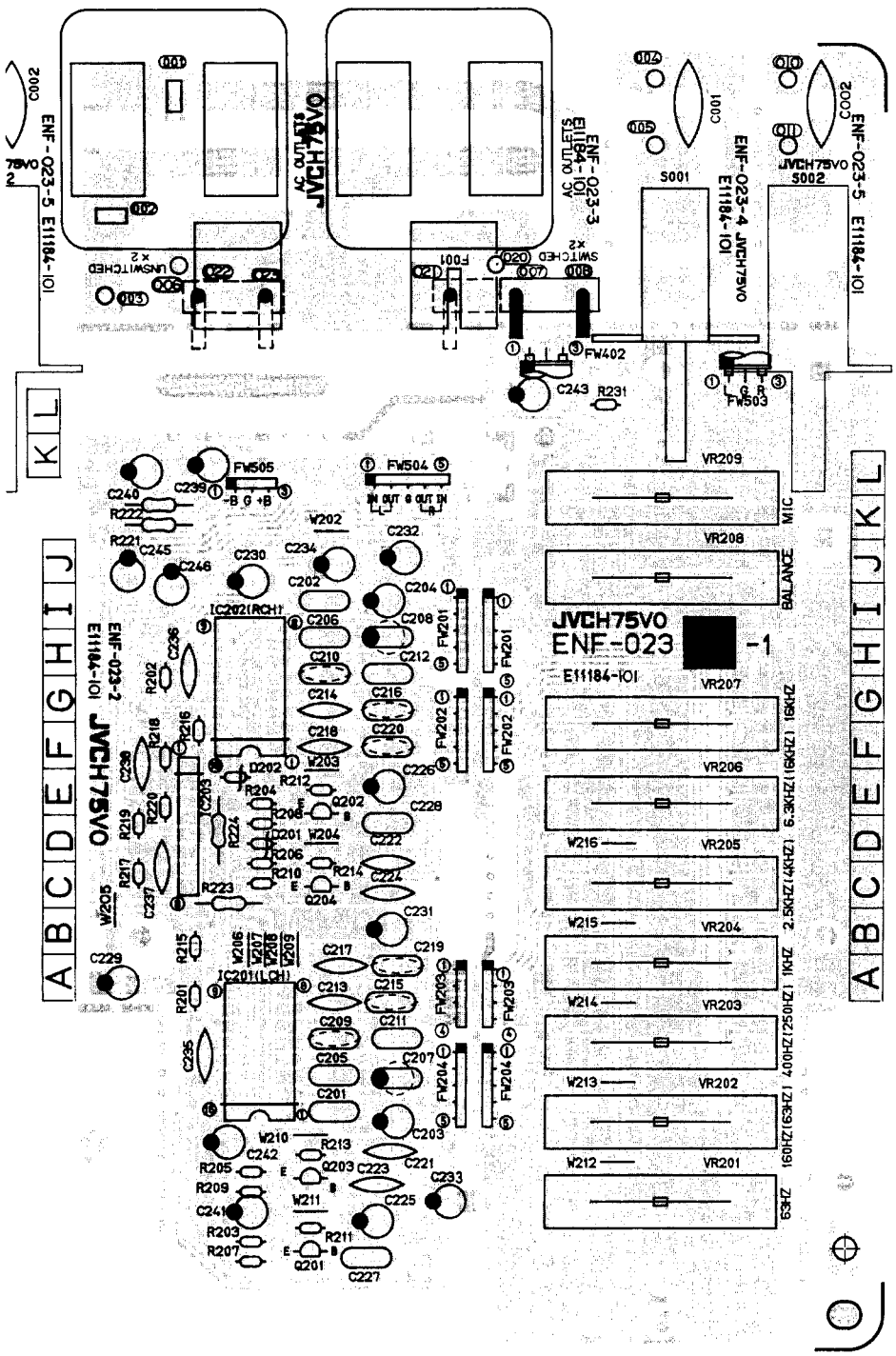
⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMG7331-001	FUSE CLIP	
		E304138-002	CIRCUIT BOARD	A
		E304138-002BS	CIRCUIT BOARD	BBS
		E65508-002	TAB	
		E67764-203	TERMINAL ASSY	
	S002	QSP1106-005	PUSH SWITCH	A
	S002	QSP1106-005BS	PUSH SWITCH	BBS

⚠ : SAFETY PARTS

■ ENF-023 □ SEA/AC Outlet P.C. Board Ass'y

Note: ENF-023 □ Varies according to the area employed. See note (1) when placing an order.
Note (1)

P.C. Board Ass'y	Designated Areas
ENF-023 D	U.S. Military Market & other Countries
ENF-023 E	Europe, Australia & U.K.
ENF-023 F	West Germany



TRANSITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	Q201	2SC2389(S,E)	SILICON	ROHM	
	Q202	2SC2389(S,E)	SILICON	ROHM	
	Q203	2SC2389(S,E)	SILICON	ROHM	
	Q204	2SC2389(S,E)	SILICON	ROHM	

⚠ : SAFETY PARTS

I. C. S

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC201	M5226P-26	I.C.	MITSUBISHI	
	IC202	M5226P-26	I.C.	MITSUBISHI	
	IC203	M5218L-R	I.C.	MITSUBISHI	

⚠ : SAFETY PARTS

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D201	MTZ9.1C	ZENER	ROHM	
	D202	MTZ9.1C	ZENER	ROHM	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C002	QCZ9019-472	4700PF		CERAMIC	
	C201	QFN81HK-333	0.033MF	50V	MYLAR	
	C202	QFN81HK-333	0.033MF	50V	MYLAR	
	C203	QETB1HM-474	0.47MF	50V	ELECTRO	
	C204	QETB1HM-474	0.47MF	50V	ELECTRO	
	C205	QFN81HK-123	0.012MF	50V	MYLAR	
	C206	QFN81HK-123	0.012MF	50V	MYLAR	
	C207	QFN81HK-184	0.18MF	50V	MYLAR	
	C208	QFN81HK-184	0.18MF	50V	MYLAR	
	C209	QFN81HK-392	3900PF	50V	MYLAR	
	C210	QFN81HK-392	3900PF	50V	MYLAR	
	C211	QFN81HK-104	0.1MF	50V	MYLAR	
	C212	QFN81HK-104	0.1MF	50V	MYLAR	
	C213	QCY21HK-222	2200PF	50V	CERAMIC	
	C214	QCY21HK-222	2200PF	50V	CERAMIC	
	C215	QFN81HK-273	0.027MF	50V	MYLAR	
	C216	QFN81HK-273	0.027MF	50V	MYLAR	
	C217	QCY21HK-681	680PF	50V	CERAMIC	
	C218	QCY21HK-681	680PF	50V	CERAMIC	
	C219	QFN81HK-153	0.015MF	50V	MYLAR	
	C220	QFN81HK-153	0.015MF	50V	MYLAR	
	C221	QCY21HK-472	4700PF	50V	CERAMIC	
	C222	QCY21HK-472	4700PF	50V	CERAMIC	
	C223	QCS21HJ-331	330PF	50V	CERAMIC	
	C224	QCS21HJ-331	330PF	50V	CERAMIC	
	C225	QETB1HM-105	1MF	50V	ELECTRO	
	C226	QETB1HM-105	1MF	50V	ELECTRO	
	C227	QFN81HK-823	0.082MF	50V	MYLAR	
	C228	QFN81HK-823	0.082MF	50V	MYLAR	
	C229	QETB1HM-475	4.7MF	50V	ELECTRO	
	C230	QETB1HM-475	4.7MF	50V	ELECTRO	
	C231	QETB1EM-106	10MF	25V	ELECTRO	
	C232	QETB1EM-106	10MF	25V	ELECTRO	
	C233	QETB1CM-226	22MF	16V	ELECTRO	
	C234	QETB1CM-226	22MF	16V	ELECTRO	
	C235	QCS21HJ-101	100PF	50V	CERAMIC	
	C236	QCS21HJ-101	100PF	50V	CERAMIC	
	C237	QCS21HJ-100	10PF	50V	CERAMIC	
	C238	QCS21HJ-100	10PF	50V	CERAMIC	
	C239	QETB1CM-107	100MF	16V	ELECTRO	
	C240	QETB1CM-107	100MF	16V	ELECTRO	
	C241	QETB1CM-226	22MF	16V	ELECTRO	
	C242	QETB1CM-226	22MF	16V	ELECTRO	
	C243	QETB1EM-106	10MF	25V	ELECTRO	
	C245	QETB1CM-226	22MF	16V	ELECTRO	
	C246	QETB1CM-226	22MF	16V	ELECTRO	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R201	QRD161J-472	4.7K	1/6W	CARBON	
	R202	QRD161J-472	4.7K	1/6W	CARBON	
	R203	QRD161J-682	6.8K	1/6W	CARBON	
	R204	QRD161J-682	6.8K	1/6W	CARBON	
	R205	QRD161J-682	6.8K	1/6W	CARBON	
	R206	QRD161J-682	6.8K	1/6W	CARBON	
	R207	QRD161J-683	68K	1/6W	CARBON	
	R208	QRD161J-683	68K	1/6W	CARBON	
	R209	QRD161J-683	68K	1/6W	CARBON	
	R210	QRD161J-683	68K	1/6W	CARBON	
	R211	QRD161J-102	1K	1/6W	CARBON	
	R212	QRD161J-102	1K	1/6W	CARBON	
	R213	QRD161J-102	1K	1/6W	CARBON	
	R214	QRD161J-102	1K	1/6W	CARBON	
	R215	QRD161J-102	1K	1/6W	CARBON	
	R216	QRD161J-102	1K	1/6W	CARBON	
	R217	QRD161J-473	47K	1/6W	CARBON	
	R218	QRD161J-473	47K	1/6W	CARBON	
	R219	QRD161J-273	27K	1/6W	CARBON	
	R220	QRD161J-273	27K	1/6W	CARBON	
⚠	R221	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R222	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R223	QRD145J-151S	150	1/4W	UNF.CARBON	
⚠	R224	QRD145J-151S	150	1/4W	UNF.CARBON	
	R231	QRD161J-222	2.2K	1/6W	CARBON	
	VR201	QVWB01W-E15C			VARIABLE	
	VR202	QVWB01W-E15C			VARIABLE	
	VR203	QVWB01W-E15C			VARIABLE	
	VR204	QVWB01W-E15C			VARIABLE	
	VR205	QVWB01W-E15C			VARIABLE	
	VR206	QVWB01W-E15C			VARIABLE	
	VR207	QVWB01W-E15C			VARIABLE	
	VR208	QVWA01W-EF5D			VARIABLE	
	VR209	QVWA01B-E14C			VARIABLE	

⚠ : SAFETY PARTS

OTHERS

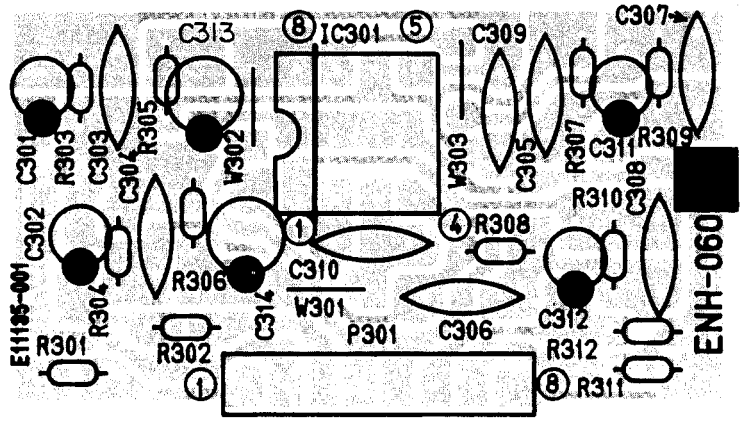
⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E11184-101	CIRCUIT BOARD	
		E65508-002	TAB	D
		E67764-302	TERMINAL	D
		E67764-303	TERMINAL	D
⚠		QMC0437-002	AC SOCKET	D
	S002	QSP1106-005	PUSH SWITCH	D

⚠ : SAFETY PARTS

■ ENH-060 □ Egualizer Module P.C. Board Ass'y

Note: ENH-060 □ Varies according to the area employed. See note (1) when placing an order.
Note (1)

P.C. Board Ass'y	Designated Areas
ENH-060 A	Europe, Australia, U.K., U.S. Military Market & Other Countries
ENH-060 B	West Germany



I. C. S

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC301	NJM4558D-D	I.C.		

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C301	QETB1HM-475	4.7MF	50V	ELECTRO	
	C302	QETB1HM-475	4.7MF	50V	ELECTRO	
	C303	QCY21HK-101	100PF	50V	CERAMIC	A
	C303	QCY21HK-471	470PF	50V	CERAMIC	B
	C304	QCY21HK-101	100PF	50V	CERAMIC	A
	C304	QCY21HK-471	470PF	50V	CERAMIC	B
	C305	QCY21HK-182	1800PF	50V	CERAMIC	
	C306	QCY21HK-182	1800PF	50V	CERAMIC	
	C307	QCY21HK-682	6800PF	50V	CERAMIC	
	C308	QCY21HK-682	6800PF	50V	CERAMIC	
	C309	QCY21HK-101	100PF	50V	CERAMIC	
	C310	QCY21HK-101	100PF	50V	CERAMIC	
	C311	QETB1HM-475	4.7MF	50V	ELECTRO	
	C312	QETB1HM-475	4.7MF	50V	ELECTRO	
	C313	QETB1AM-476	47MF	10V	ELECTRO	
	C314	QETB1AM-476	47MF	10V	ELECTRO	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R301	QRD161J-222	2.2K	1/6W	CARBON	
	R302	QRD161J-222	2.2K	1/6W	CARBON	
	R303	QRD161J-473	47K	1/6W	CARBON	
	R304	QRD161J-473	47K	1/6W	CARBON	
	R305	QRD161J-751	750	1/6W	CARBON	
	R306	QRD161J-751	750	1/6W	CARBON	A
	R306	QRD161J-751	750	1/6W	CARBON	B
	R307	QRD161J-393	39K	1/6W	CARBON	
	R308	QRD161J-393	39K	1/6W	CARBON	
	R309	QRD161J-474	470K	1/6W	CARBON	
	R310	QRD161J-474	470K	1/6W	CARBON	
	R311	QRD161J-104	100K	1/6W	CARBON	
	R312	QRD161J-104	100K	1/6W	CARBON	

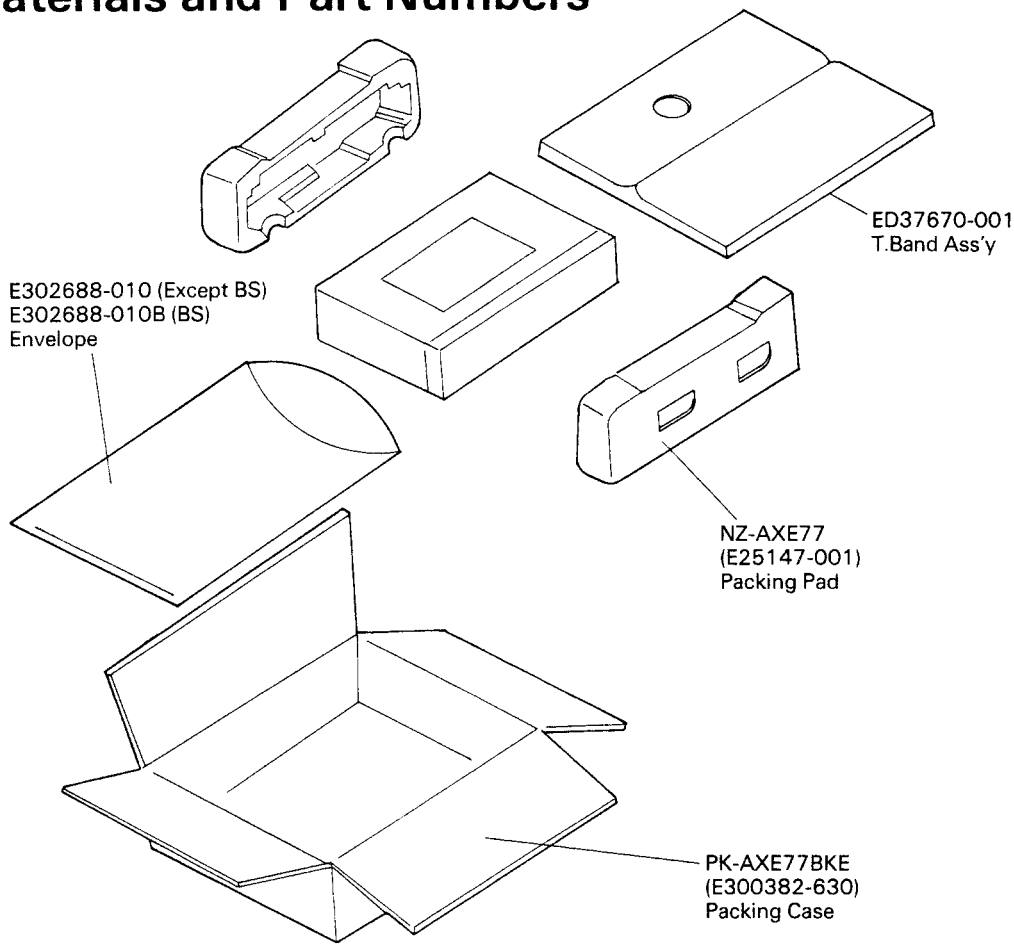
⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E11135-001	CIRCUIT BOARD	
	P301	EMV5101-008B	PLUG ASSY	

⚠ : SAFETY PARTS

Packing Materials and Part Numbers



Accessories List

⚠	Part Number	Part Name	Description	Areas
	E30580-1299A	Instruction Book		Except BS
	E30580-1299ABS	Instruction Book		BS
	BT20048B	Warranty Card		P,PG
	BT20029C	Warranty Card		A
	BT20064C	Warranty Card		G
	BT20060	Warranty Card		BS
	E43486-216A	Instruction Sheet		
	BT20046B	Service Information		P,PG
	BT20071A	Service Center		C
	BT20066	EEC Agency		G,BS
	E300196-033	Envelope		Except BS
	E300196-033B	Envelope		BS
	E6581-4	Envelope		U,P,PG
⚠	QMF51A2-5R0S	Fuse		U,PG
⚠	QMF51A2-2R5S	Fuse		P
	BT20054-006A	FTZ Information		G
	E35497-017	Caution Sheet	110V	P
	E35497-019	Caution Sheet	220V	U,PG
⚠	E04056	Siemens Plug		U,PG

The Marks for Designated Areas

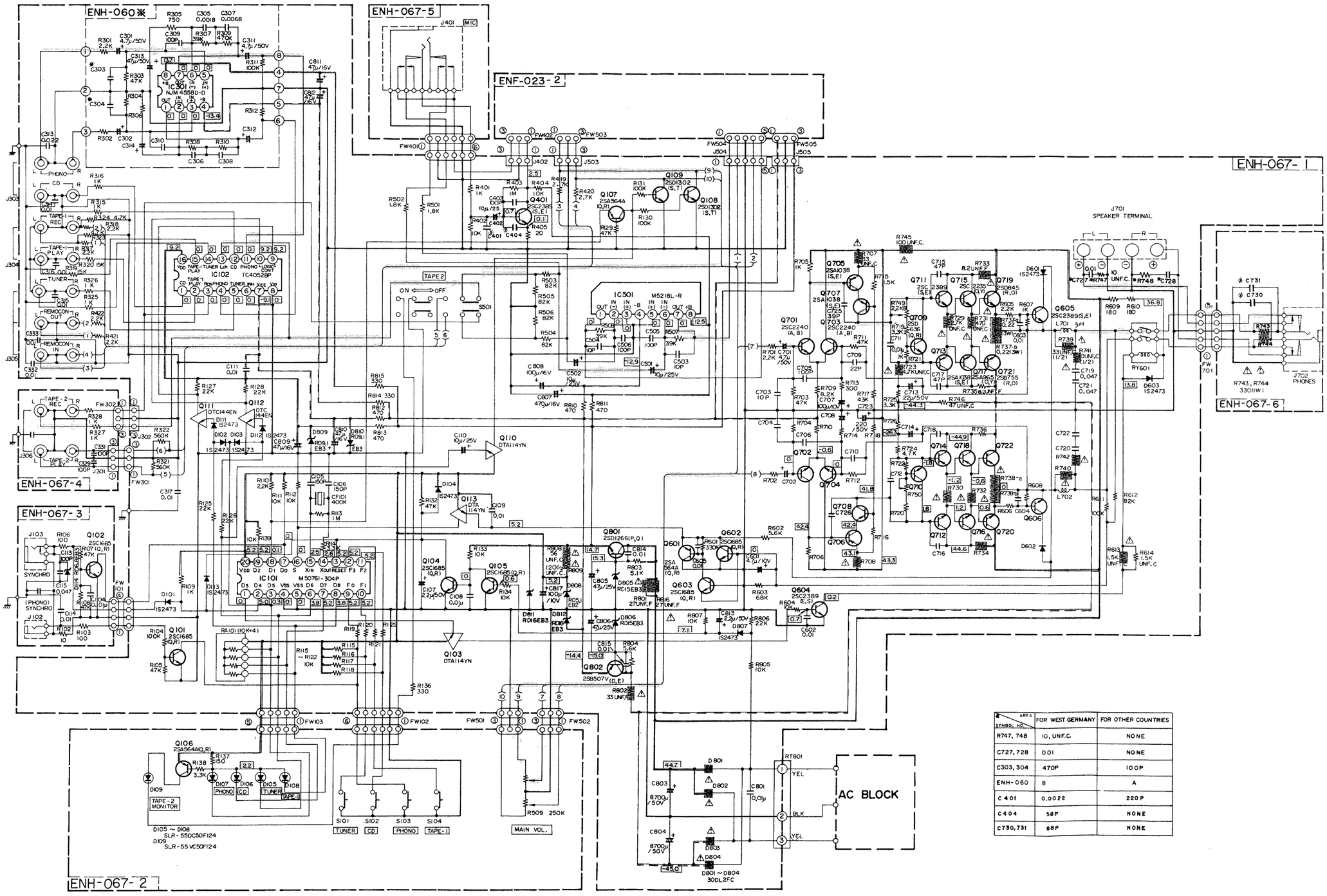
⚠: Safety Parts

E ..... Europe
A ..... Australia
G ..... West Germany
BS ..... U.K.
P, PG ..... U.S. Military Market
U ..... Other Countries
No marks indicates all areas.

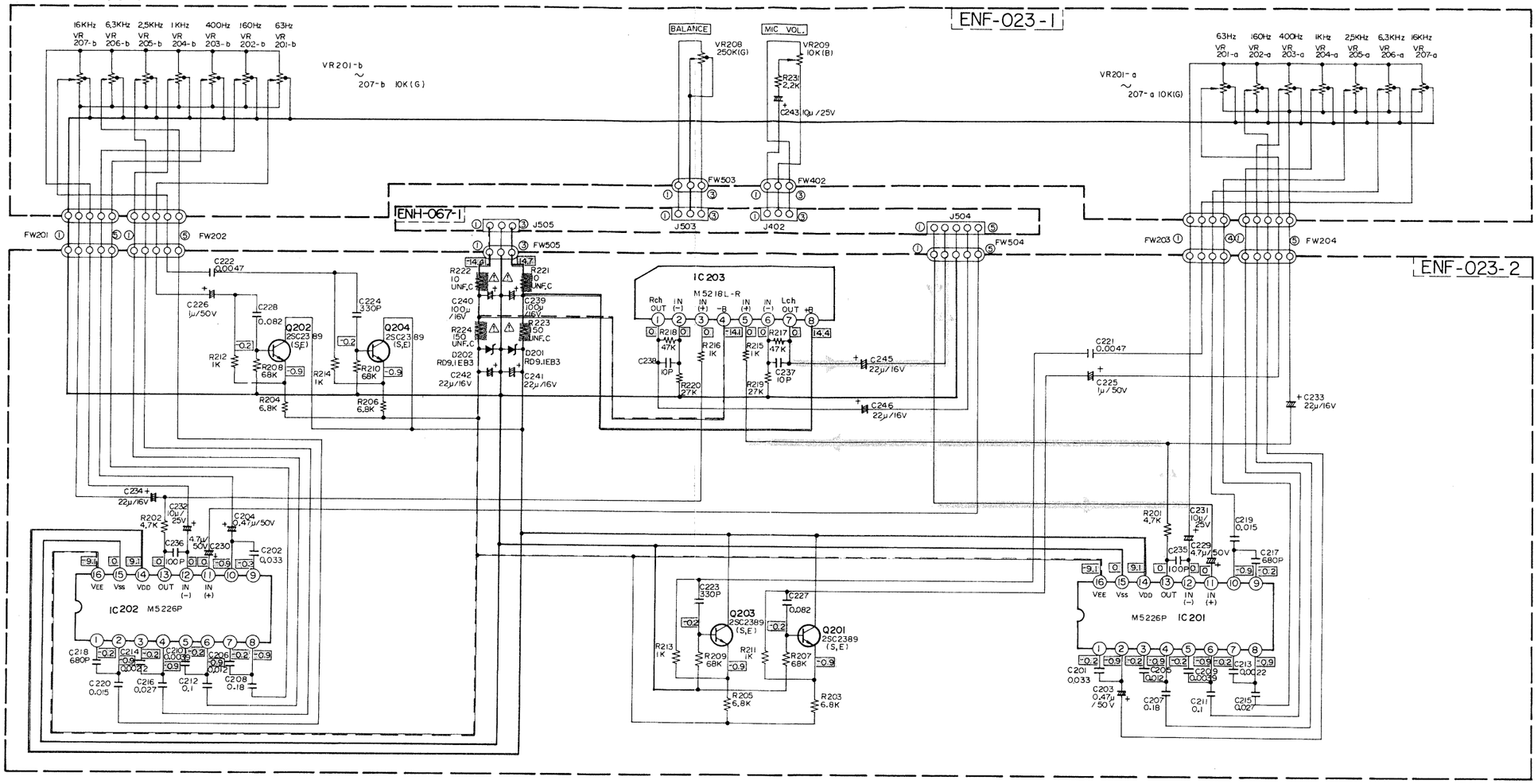
MEMO

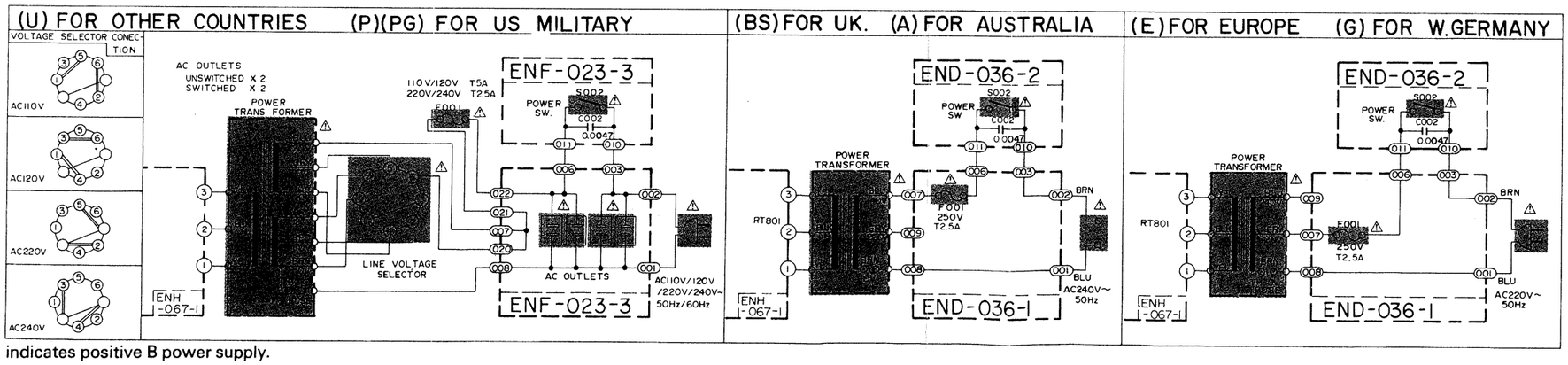
Schematic Diagram

■ AX-E77BK Main Amplifier Section



■ AX-E77BK SEA & Power Supply Section

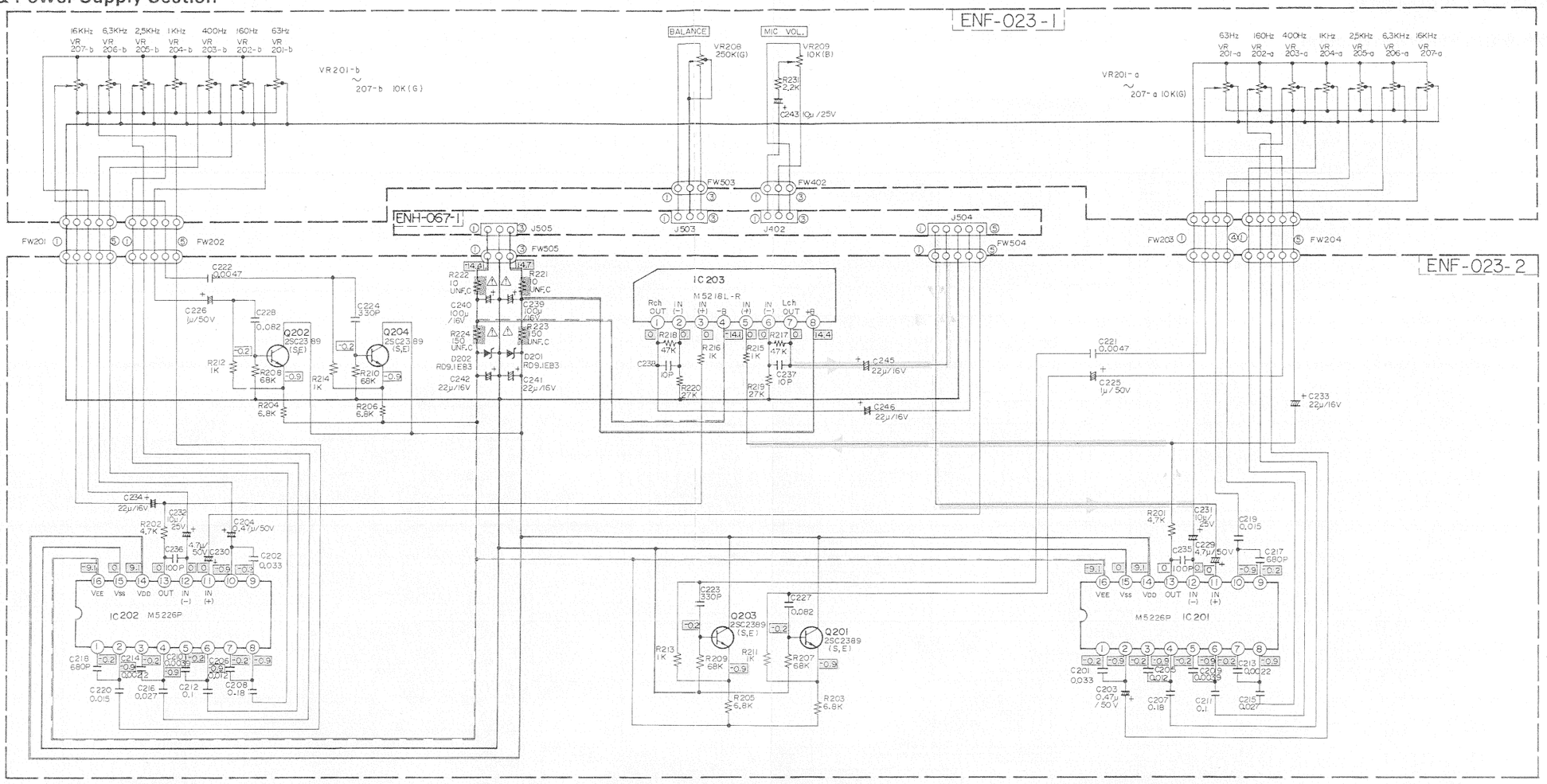


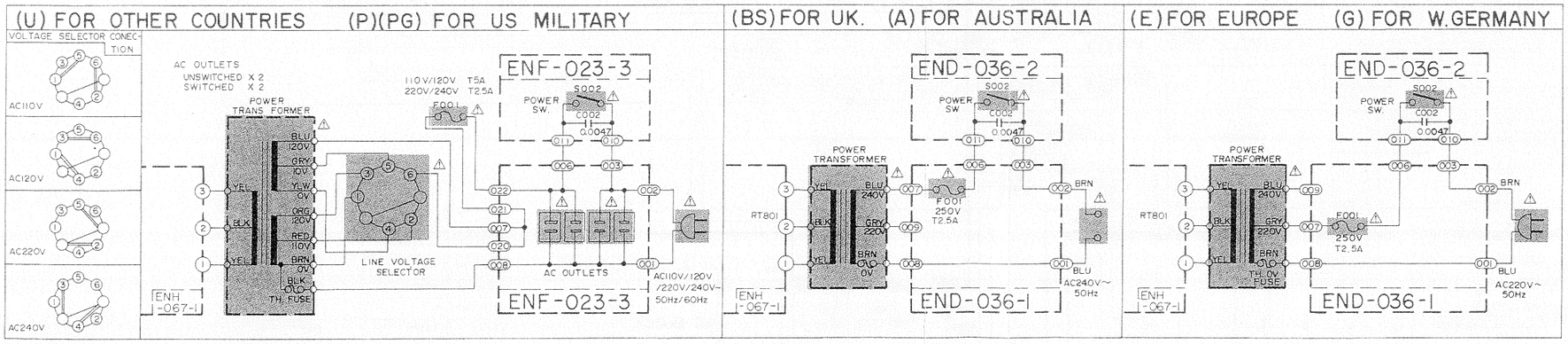


Notes:

1. —— indicates positive B power supply.
2. ----- indicates negative B power supply.
3. indicates signal path.
4. shows DC voltage to the chasiss with no signal input.
5. When replacing the parts in the darkened area ( ) and those marked with ⚠, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

■ AX-E77BK SEA & Power Supply Section





Notes:

1. —— indicates positive B power supply.
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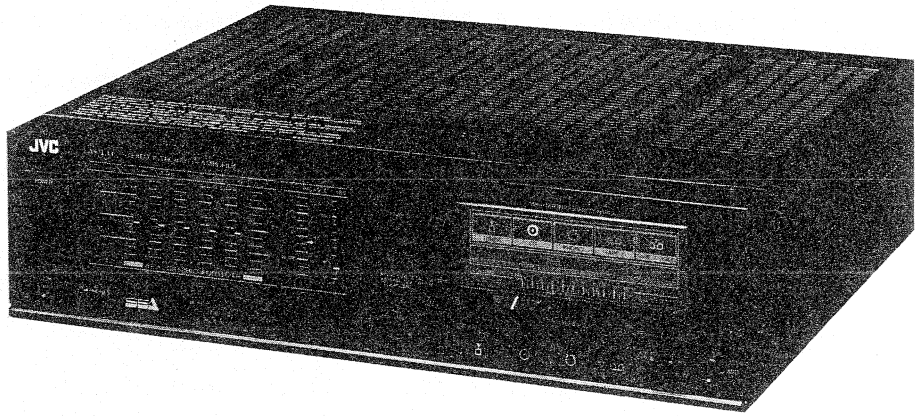
3. ▒▒ indicates signal path.
4. ▭ shows DC voltage to the chasiss with no signal input.
5. When replacing the parts in the darkened area (▒▒) and those marked with ⚠, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

JVC

SERVICE MANUAL

STEREO INTEGRATED AMPLIFIER

MODEL No. AX-E33BK



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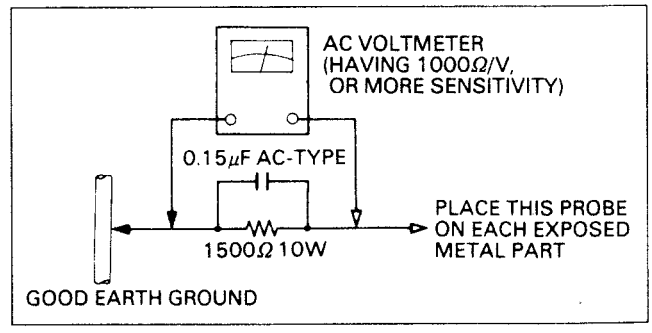
Parts List	Separate-volume Insertion

This manual combines two single volumes; Service manual and Parts list.

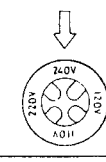
No. 2884
Jan. 1986

Safety Precautions

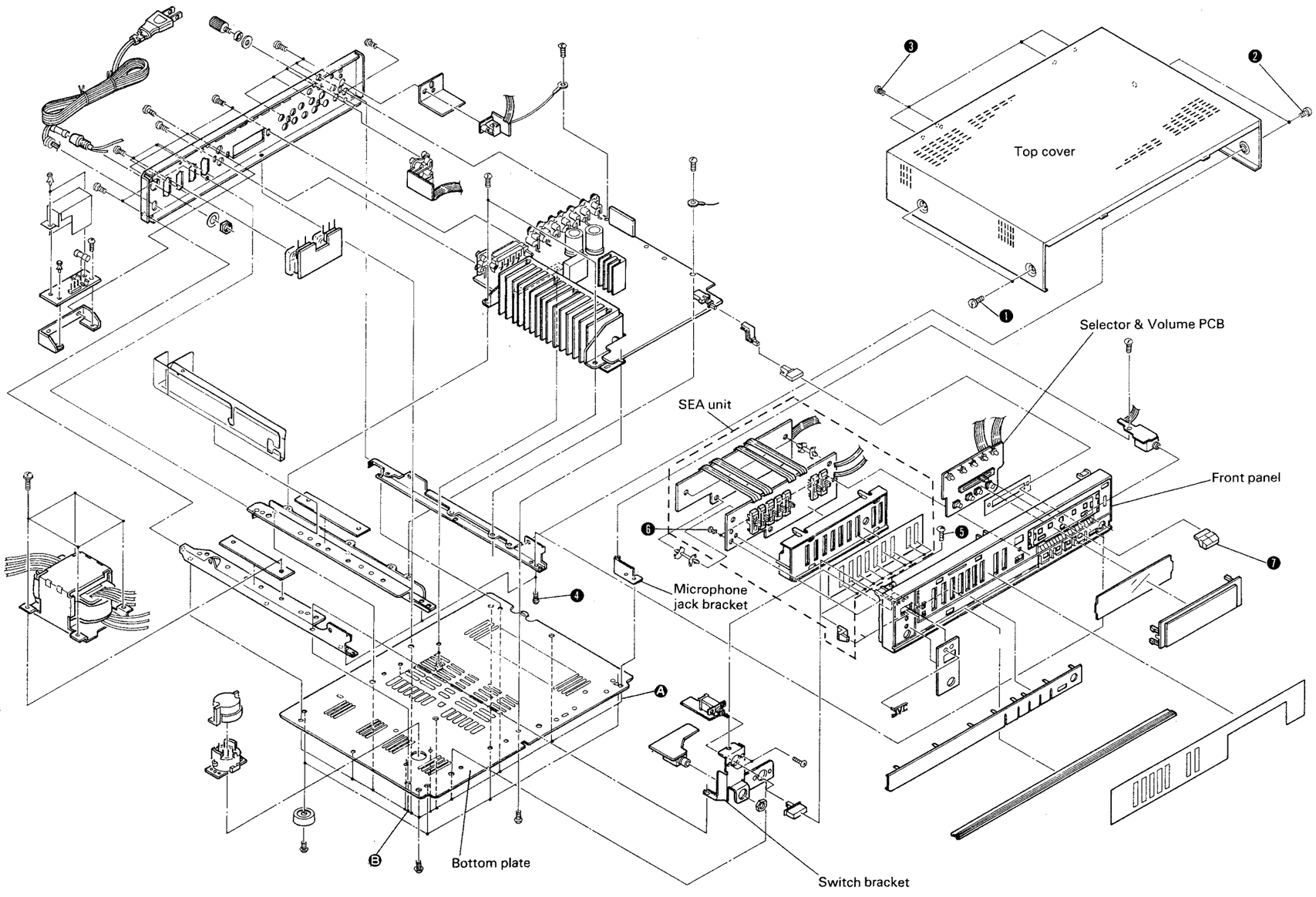
1. The design of this product contains special hardware, many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after reassembling.
5. Leakage current check
   (Safety for electrical shock hazard)
   After reassembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method.
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.).
     This corresponds to 0.5 mA AC (r.m.s.).



CHECKING YOUR LINE VOLTAGE (Except for U.K., Continental Europe and Australia)
Before inserting the power plug, please check this setting to see that it corresponds with the line voltage in your area. If it doesn't be sure to adjust the voltage selector switch to the proper setting before operating this equipment. The voltage selector switch is located underneath the bottom cover.
CAUTION: Before selecting the "Voltage selector switch" to proper voltage disconnect the power plug.



Exploded View and Removal Procedures



■ **Removing the Top Cover**

1. Remove eight screws ❶ – ❸, four of them are on both sides of the top cover and two are on the rear panel.
2. Raise the rear section of the top cover slightly and remove the lugs of the front section. At this time, since the upper side of the front panel is liable to be damaged, attention should be paid not to damage it, such as sticking the cracking-prevention sheet on it.

■ **Removing the Front Panle**

1. Remove the top cover.
2. Remove three screws ❹ retaining the front panel from the bottom and a screw ❺ retaining from the top.

■ **Removing the SEA Unit**

1. Remove the front panel.
2. Remove two rivets ❻ and pull out them toward you.
3. Take off the lugs inseted into the front panel to remove the SEA unit.

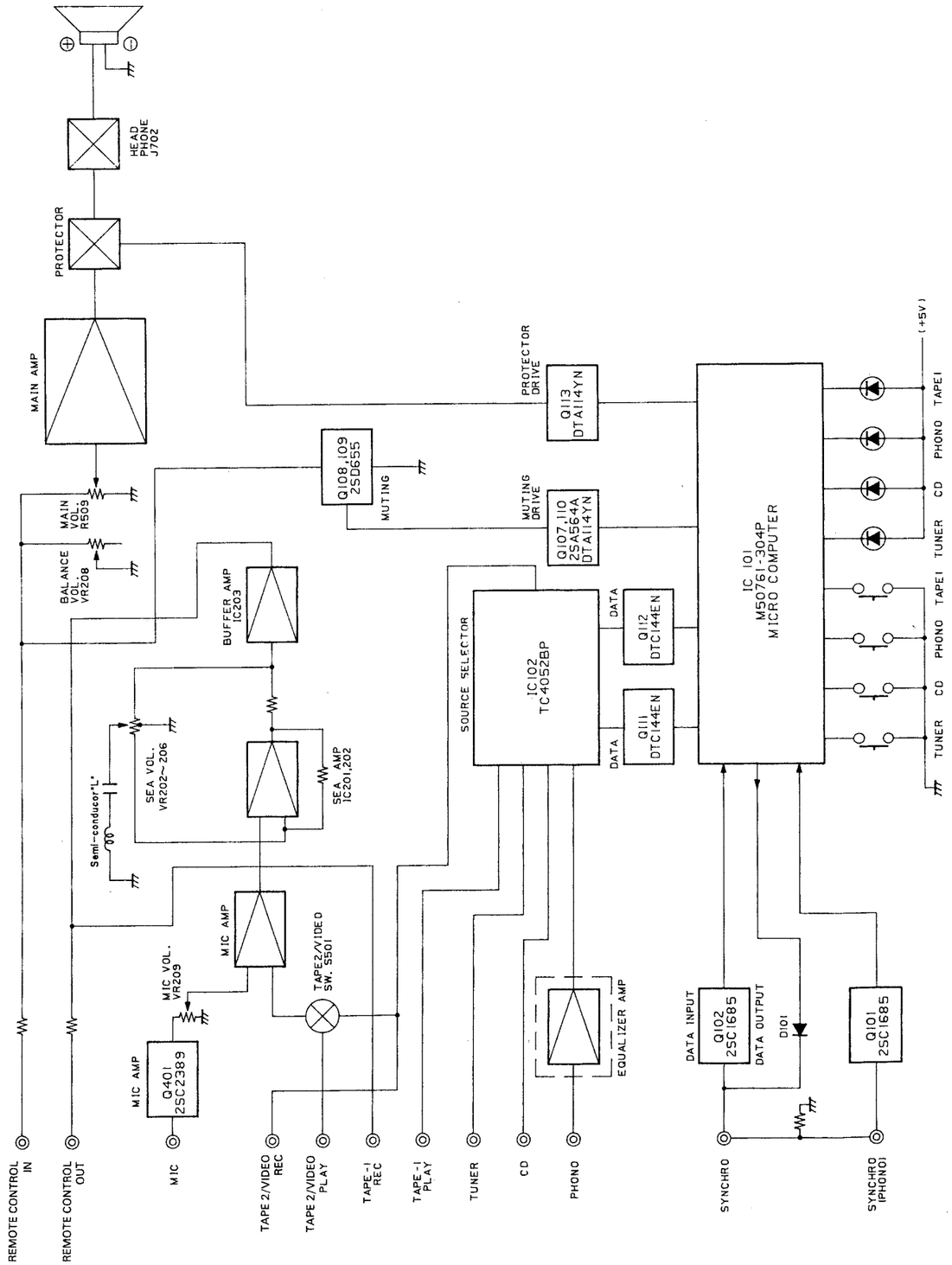
■ **Removing the Volume PC Board**

1. Remove the front panel.
2. Pull out the volume knob ❼.
3. Take off the lugs inserted into the front panel to remove the volume PC board.

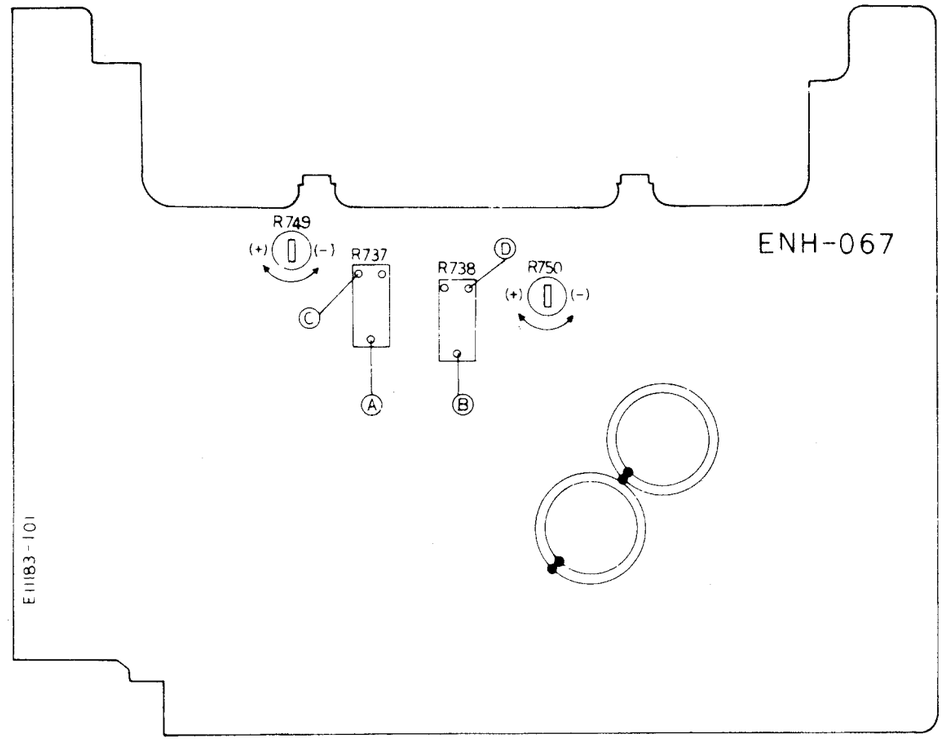
■ **Removing the Bottom Plate**

1. Remove 16 screws (all screws other than the feet) on the bottom surface.
   NOTE:
   Since the screw Ⓐ is fixed together with the bracket of the microphone jack, and the screw Ⓑ is fixed together with the bracket of the power switch, take care when reassembling.

Block Diagram



Adjustment Procedures



Location of adjusting parts

■ Adjusting the idling current

(1) Before turning on the power, fully turn the trimmer resistors R749 (L channel) and R750 (R channel) on the power amp PCB counterclockwise.

(2) After turning on the power, adjust trimmer resistors R749 and R750 so that the potentials between points Ⓐ – Ⓒ of emitter resistor R737 and points Ⓑ – Ⓓ of R738 are within 2.0 – 8.0 mV

L channel: Measure the potential of R737 Ⓒ (emitter of Q719) for R737 Ⓐ).

R channel: Measure the potential of R738 Ⓓ (emitter of Q720) for R738 Ⓑ).

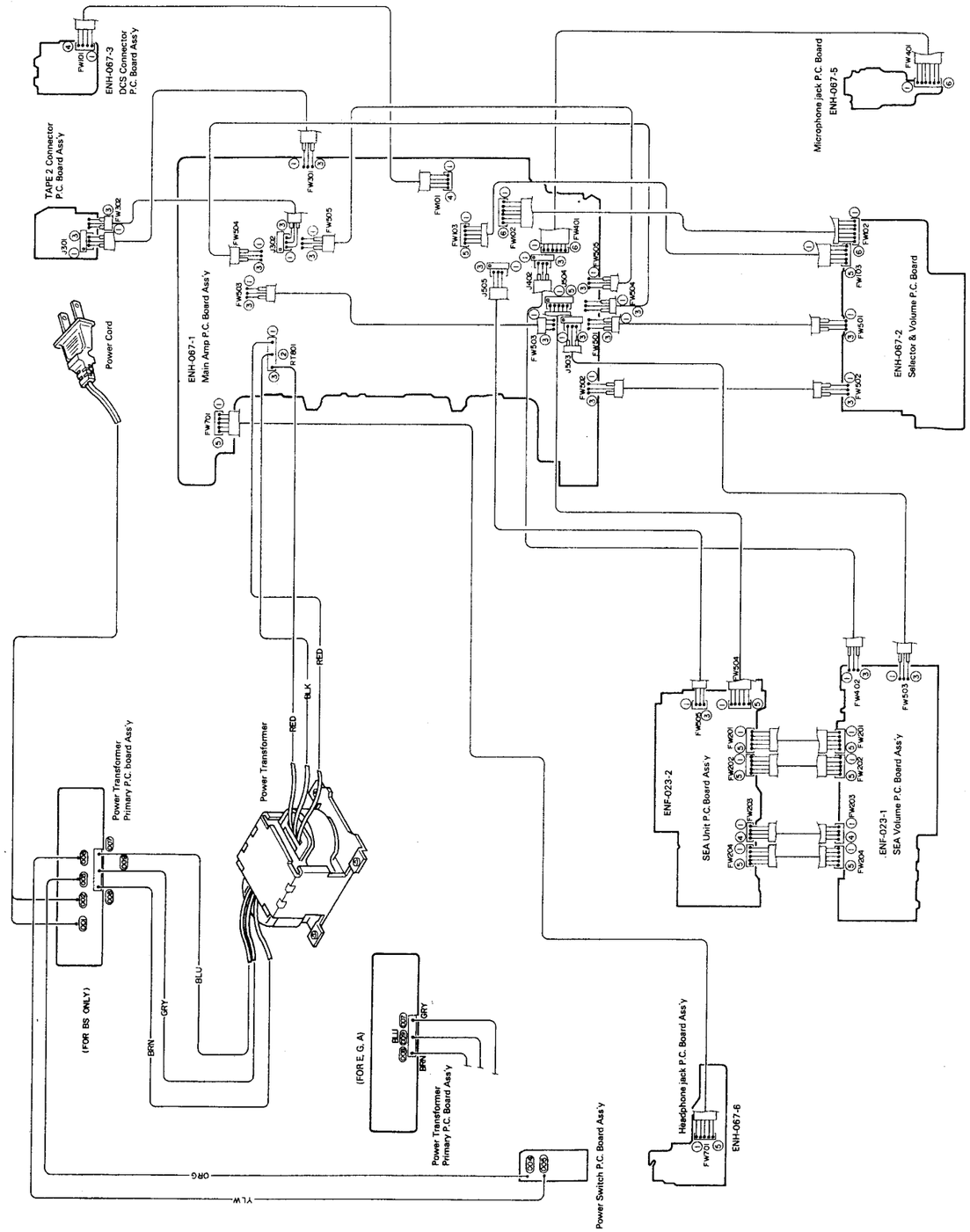
(3) After about 5 minutes and the heatsink becomes warm, adjust R749 and R750 so that the potential between above points is 3 mV. Check that the measured potential does not change even when the heatsink becomes hot.

NOTE:

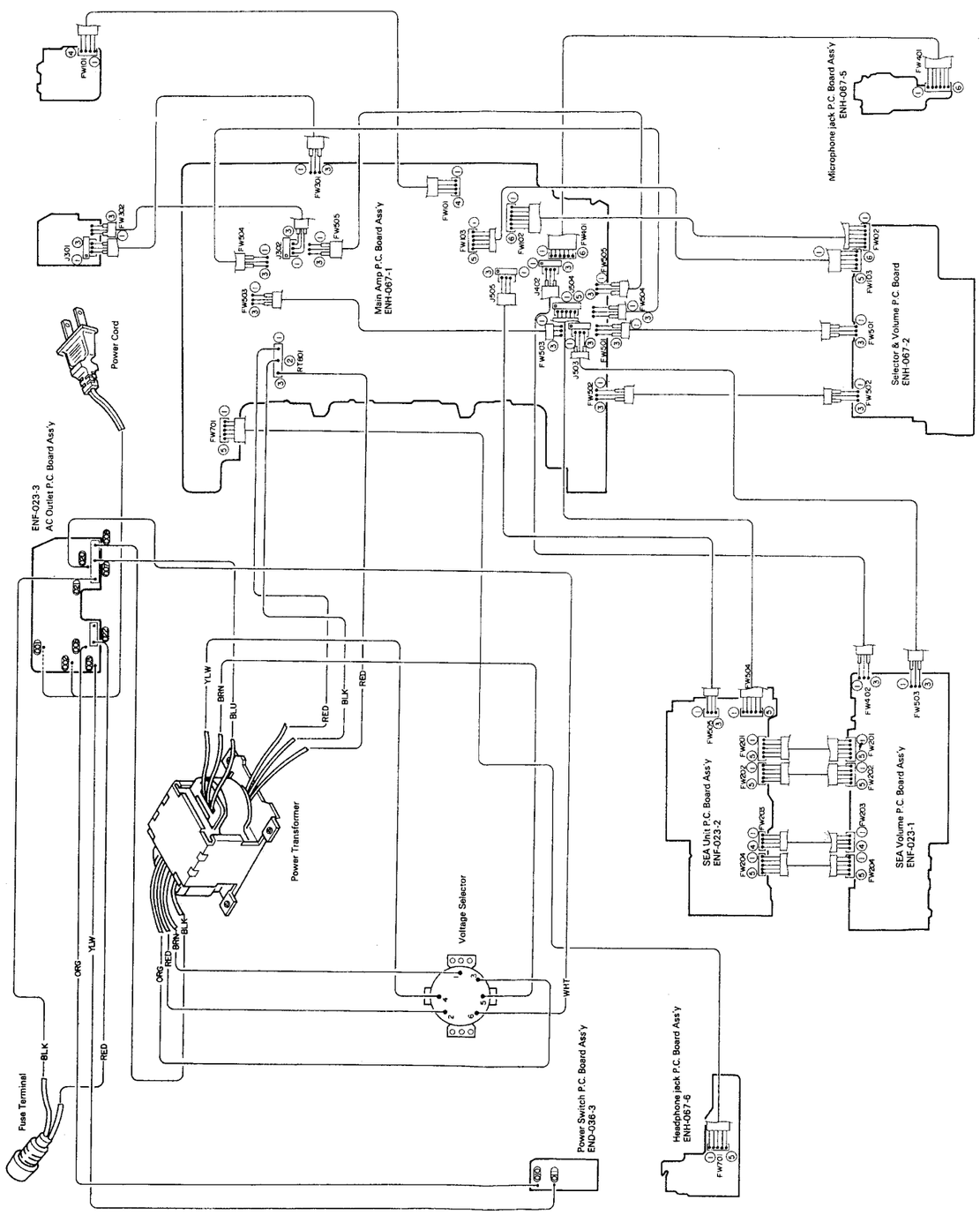
When making this measurement, be sure to move the probes of the measuring instrument and cabinet (metal case) away from the amplifier (AX-E33BK) ground or other measuring instrument ground.

Connection Diagram

■ For BS, E, G, A

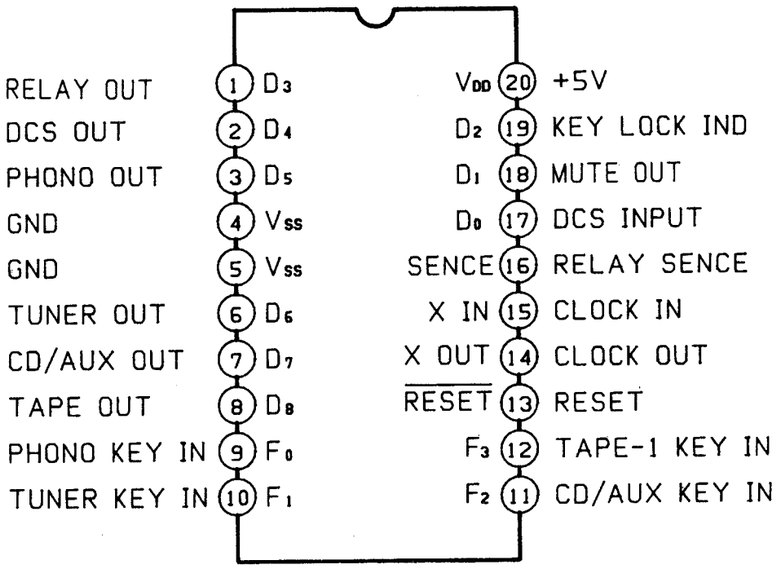


■ For U.S. Military Market and Other Countries



Guidance to Repairing

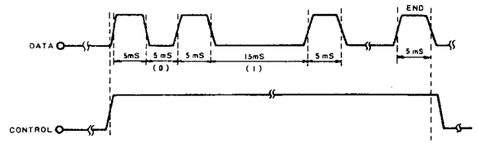
■ IC101 (M50761-304P) Pin Functions



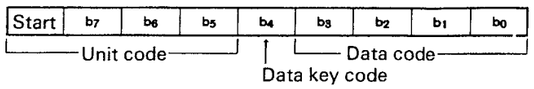
■ Data Transmission Method

Two types of DCS are provided. One is the SYNCHRO PLAYER terminal (2.5 mm dia) exclusively for the AL-E33BK the other is the SYNCHROterminal (3.5 mm dia) for other equipment (FX-E77BK etc.)
When the PLAY button is pressed on the turntable, the SYNCHRO terminal exclusively for the turntable (AL-E33BK) becomes "H" level of about 5V.
The SYNCHRO terminal (3.5 mm dia), connected via the common bus line to the other equpment, handles two-way data excange by bollowing data transmission method.

Transimitted data



1-word/1-command structure



$b_4 = 0$ Operation Code
$b_4 = 1$ Station number or tune number code (not used in this model)

■ Signal Code List

● Code list 1 : $b_4 = 0$ (OP = Optional)

(A) DECK

Hexadecimal	Data code				Function	Key input with same meaning
0	0	0	0	0	———	———
1	0	0	0	1	PLAY status set	PLAY
2	0	0	1	0	STOP status set ["STOP (I)" signal]	STOP
6	0	1	1	0	REC PLUSE set after 4-sec, REC MUTE	REC MUTE PAUSE
9	1	0	0	0	REC PLAY status set	REC · PLAY
E	1	1	1	0	STOP status set only during PLAY	——— "STOP (II)" signal

(B) TURNTABLE

Hexadecimal	Data code				Function	Key input with same meaning
6	0	1	1	0	Tonearm returns to arm rest and turntable STOP status set	——— (ALL STOP)
7	0	1	1	1	"START"	
9	1	0	0	1	Deck saves recording-discontinued signal	——— (NON REC)
A	1	0	1	0	Saves the signal when the deck enters from the mode other than rec to REC PAUSE mode.	——— (REC · PAUSE)

(C) AMPLIFIER

Hexadecimal	Data code				Function	Key input with same meaning
0	0	0	0	0	———	———
1	0	0	0	1	SOURCE switched to PHONO	
3	0	0	1	1	SOURCE switched to CD/AUX	CD/AUX
4	0	1	0	0	SOURCE switched to TAPE-1	TAPE-1
9	1	0	0	0	——— Edit-recording start signal	———
A	1	0	1	0	SOURCE returned to previous setting [REC (SOURCE)]	——— "REC (SOURCE)"

(D) TUNER

Hexadecimal	Data code				Function	Key input with same meaning
0	0	0	0	0	Cancellation of audio muting of TUNER	———

(E) CD PLAYER

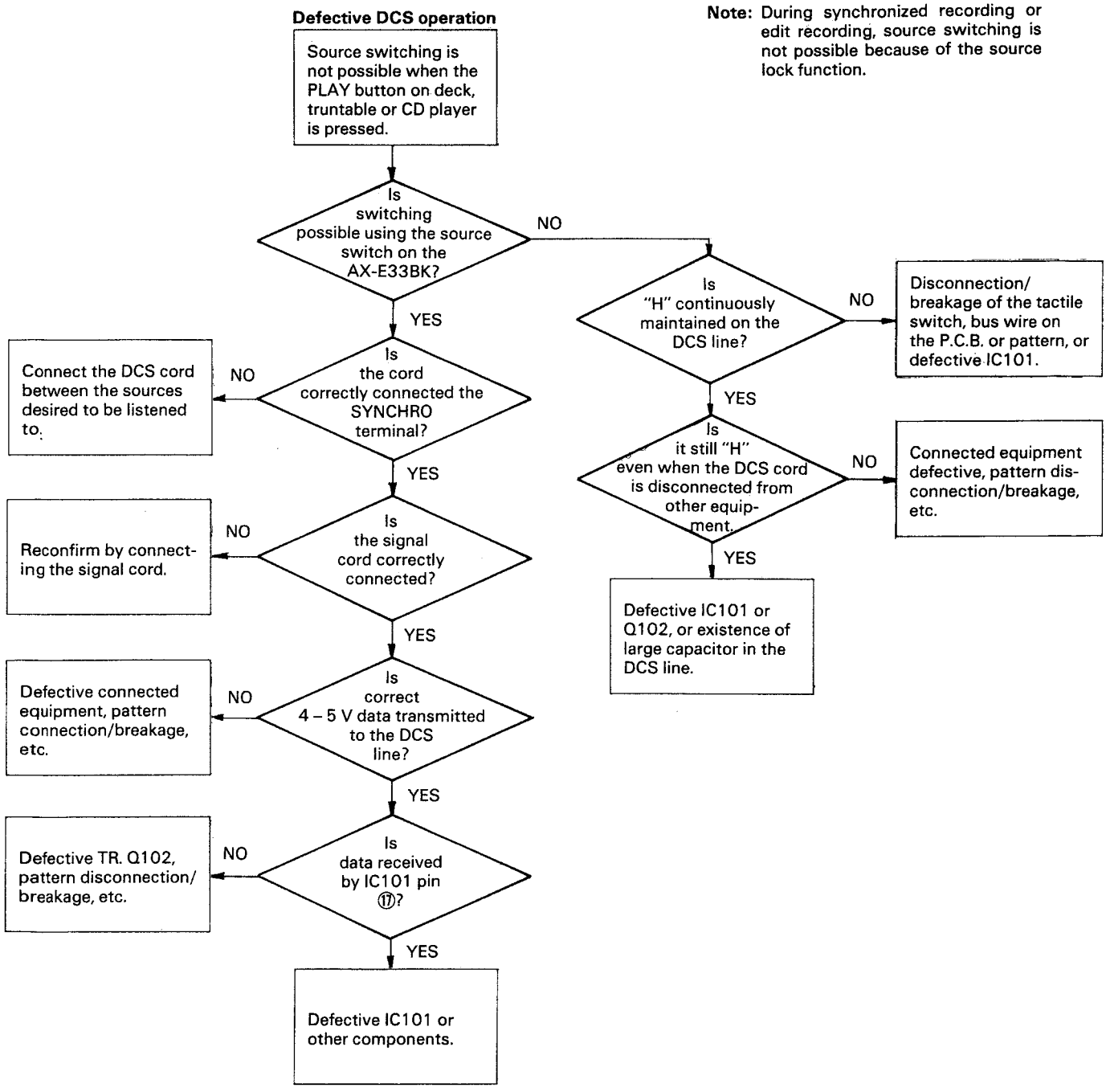
Hexadecimal	Data code				Function	Key input with same meaning
1	0	0	0	1	PLAY status set	———

● Code list

	Unit code			
0	0	0	0	———
1	0	0	1	DECK
2	0	1	0	CD PLAYER
4	1	0	0	TURNTABLE
5	1	0	1	AMPLIFIER
8	1	1	1	TUNER

As the SYNCHRO terminal uses a common bus line with all equipment as shown in the tables above, the or der of connection of equipment poses no problem.
The SYNCHRO terminal is not connected to GROUND; because of this, DCS does not function when signal codes are not continuously transmitted between the equipment.

■ Troubleshooting


Defective DCS operation
Source switching is not possible when the PLAY button on deck, truntable or CD player is pressed.
Is switching possible using the source switch on the AX-E33BK?
NO
YES
Is "H" continuously maintained on the DCS line?
NO
Disconnection/ breakage of the tactile switch, bus wire on the P.C.B. or pattern, or defective IC101.
YES
Is it still "H" even when the DCS cord is disconnected from other equipment.
NO
Connected equipment defective, pattern disconnection/breakage, etc.
YES
Defective IC101 or Q102, or existence of large capacitor in the DCS line.
Is the cord correctly connected the SYNCHRO terminal?
NO
Connect the DCS cord between the sources desired to be listened to.
YES
Is the signal cord correctly connected?
NO
Reconfirm by connecting the signal cord.
YES
Is correct 4 – 5 V data transmitted to the DCS line?
NO
Defective connected equipment, pattern connection/breakage, etc.
YES
Is data received by IC101 pin ⑰?
NO
Defective TR. Q102, pattern disconnection/ breakage, etc.
YES
Defective IC101 or other components.

Note: During synchronized recording or edit recording, source switching is not possible because of the source lock function.

When DCS is defective as shown in the above example, check if signals are output on the DCS data line.

(Simplified check method)

Apply probes of the tester (for voltage measurement) between the SYNCHRO terminal and the ground, and press the button of the equipment ot be checked then check if the tester needle moves with a momentary shaking motion.

PARTS LIST

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■ ENF-023 □ SEA/AC Outlet P.C. Board Ass'y 2-10
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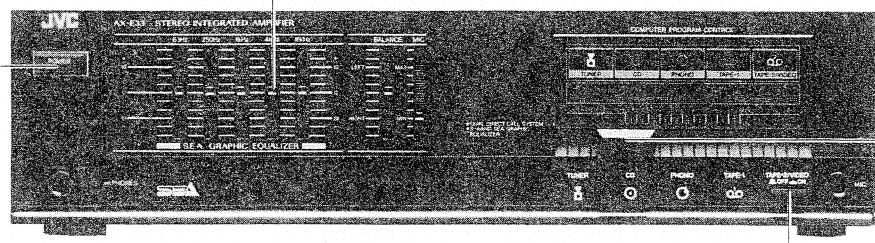
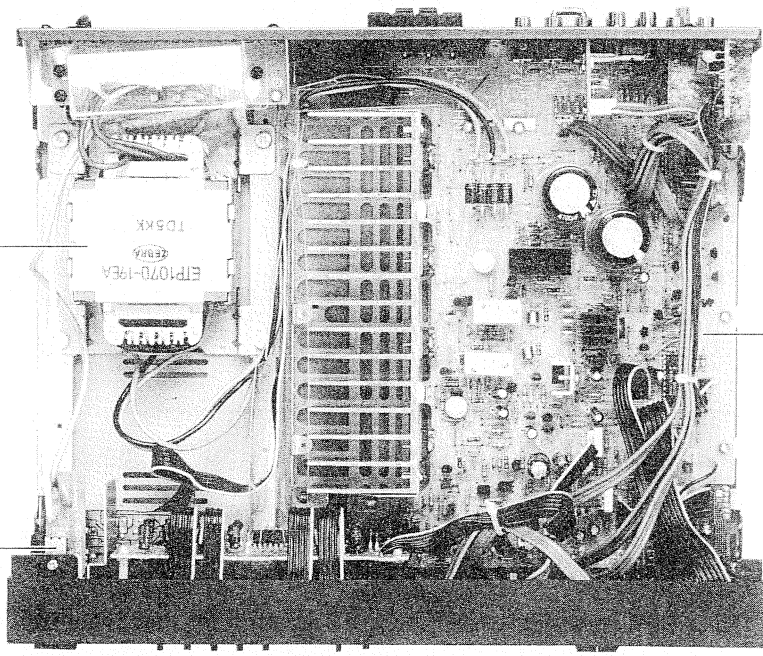
Main Parts Locations

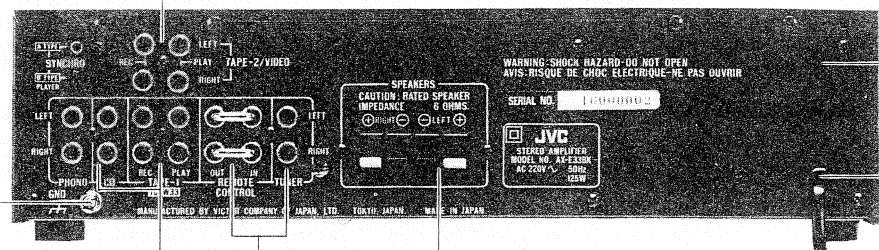
Front View



Top View

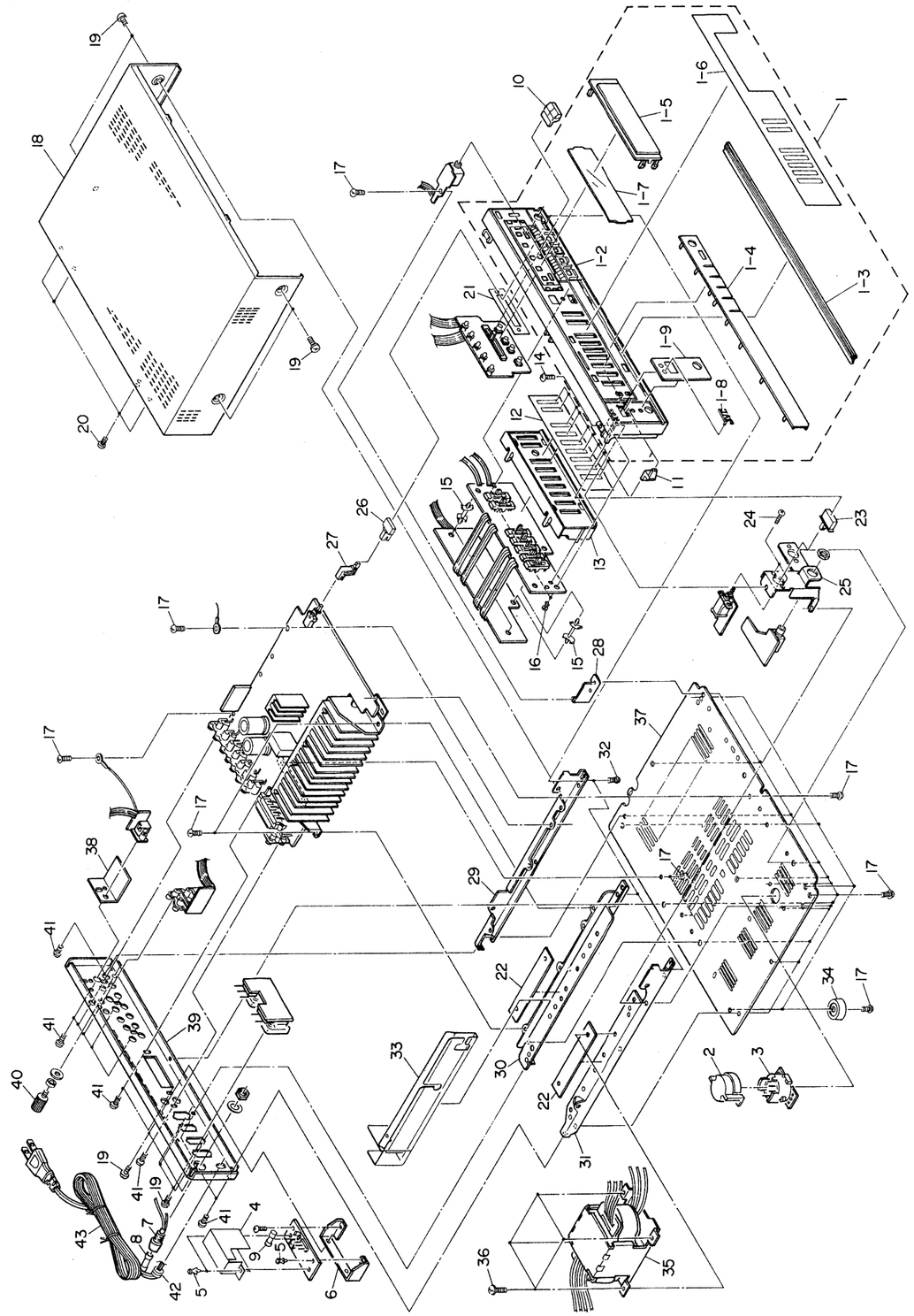


Rear View



⚠ :Safety Parts

Exploded View and Part List



⚠	Item No.	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-AXE33BKE	Front Panel Ass'y	1		
	1-2	E11186-001	Front Panel	1		
	1-3	E72441-002	Fitting	1		
	1-4	E25125-004	Operation Plate	1		
	1-5	E303904-001	Window	1		
	1-6	E25117-003	Front Plate	1		
	1-7	E303910-003	Screen	1		
	1-8	E70912-001	JVC Mark	1		
	1-9	E303902-001	Ornament	1		
	2	E302764-001	Voltage Selector Cover	1		U,P,PG
⚠	3	QSR0085-007	Voltage Selector	1		U,P,PG
	4	E72922-001	Cover	1		E,A,G,BS
	5	E48729-008	Plastic Rivet	3		E,A,G,BS
	6	E71074--002	Bracket	1		E,A,G,BS
	7	QMG0301-003	Fuse Holder	1		U,P,PG
⚠	8	QMG51A2-1R25S	Fuse	1		U,PG
⚠		QMF51A2-2R5S	Fuse	1		P
⚠	9	QMF51A2-1R25S	Fuse	1		E,A,G
⚠		QMF51E2-1R25SBS	Fuse	1		BS
	10	E72450-001	Volum knob	1		
	11	E72451-001	Slide knob	7		
	12	E303923-001	SEA Sheet	1		
	13	E25143-001	SEA Escutcheon	1		
	14	SPSB3005Z	Screw	1		
	15	E300796-001	Fasterer	3		
	16	E48729-007	Plastic Rivet	2		
	17	SBSB3008N	Screw	19		
	18	E25141-002	Metal Cover	1		Except BS
		E25141-003	Metal Cover	1		BS
	19	SDSB3008M	Screw	8		
	20	SHSB3008M	Screw	2		
	21	E72662-001	Mask Plate	1		
	22	E72647-001	Spacer	2		
	23	E303883-001	Push Button	1		
	24	SBST3006Z	Screw	4		
	25	E303907-002	Switch Bracket	1		
	26	E72468-001	Push Button	1		
	27	E72470-001	Push Shaft	1		
	28	E72452-001	Mic Bracket	1		
	29	E303921-001	Side Bracket	1		
	30	E303922-001	Center Bracket	1		
	31	E303920-001	Side Bracket	1		
	32	SBSF3008Z	Screw	3		
	33	E303992-001	Protector	1		
	34	E47227-020	Foot	4		
⚠	35	ETP1070-19FA	Power Transformer	1		U,P,PG
⚠		ETP1070-19EA	Power Transformer	1		E,G,A
⚠		ETP1070-19EABS	Power Transformer	1		BS
	36	E65389-004	Ass'y Screw	4		
	37	E25150-006	Bottom Plate	1		Except U,P,PG
		E25150-007	Bottom Plate	1		U,P,PG
	38	E72502-002	Shield Bracket	1		
	39	E25133-004	Rear Panel	1		U,P,PG
		E25133-005	Rear Panel	1		E,G
		E25133-006	Rear Panel	1		A,BS

⚠ : Safety Parts

⚠	Item No.	Part Number	Part Name	Q'ty	Description	Areas
	40	E70078-001	GND. Terminal	9		
	41	SBSB3008M	Screw	9		
⚠	42	QHS3876-162	Cord Stopper	1		Except BS
⚠		QHS3876-162BS	Cord Stopper	1		BS
⚠	43	QMP7600-250	Power Cord	1		U,P,PG
⚠		QMP3900-200	Power Cord	1		E,G
⚠		QMP2560-244	Power Cord	1		A
⚠		QMP9017-008BS	Power Cord	1		BS

⚠ : Safety Parts

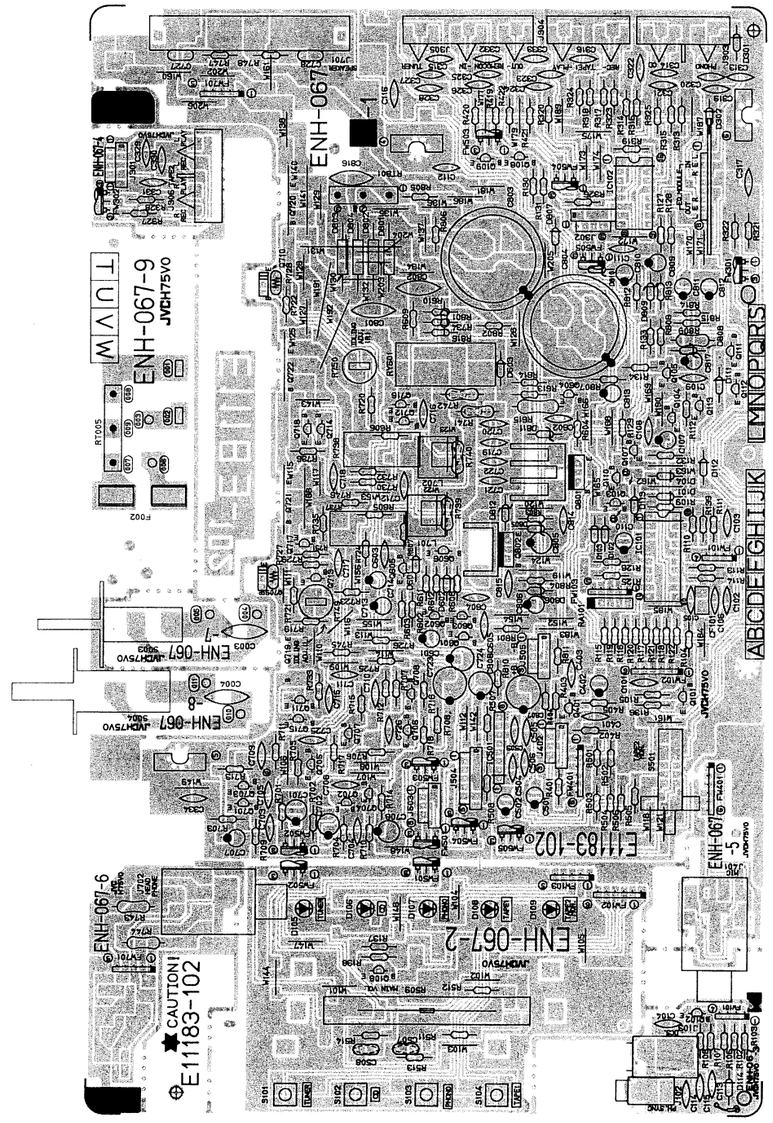
The Marks for Designated Areas
E ..... Europe
A ..... Australia
G ..... West Germany
BS ..... U.K.
P, PG ..... U.S.Military Market
U ..... Other Countries
No marks indicates all areas.

Printed Circuit Board Ass'y and Parts List

■ ENH-067 □ Amplifier P.C. Board Ass'y

Note: ENH-067 □ Varies according to the areas employed. See note (1) when placing an order.
Note (1)

P.C. Board Ass'y	Designated Areas
ENH-067 J	U.S. Military Market & Other Countries
ENH-067 K	Europe, U.K. & Australia
ENH-067 L	West Germany



⚠	Item No.	Part Number	Part Name	Q'ty	Description	Areas
	40	E70078-001	GND. Terminal	9		
	41	SBSB3008M	Screw	9		
⚠	42	QHS3876-162	Cord Stopper	1		Except BS
⚠		QHS3876-162BS	Cord Stopper	1		BS
⚠	43	QMP7600-250	Power Cord	1		U,P,PG
⚠		QMP3900-200	Power Cord	1		E,G
⚠		QMP2560-244	Power Cord	1		A
⚠		QMP9017-008BS	Power Cord	1		BS

⚠ : Safety Parts

The Marks for Designated Areas

E ..... Europe
A ..... Australia
G ..... West Germany
BS ..... U.K.
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U ..... Other Countries

No marks indicates all areas.

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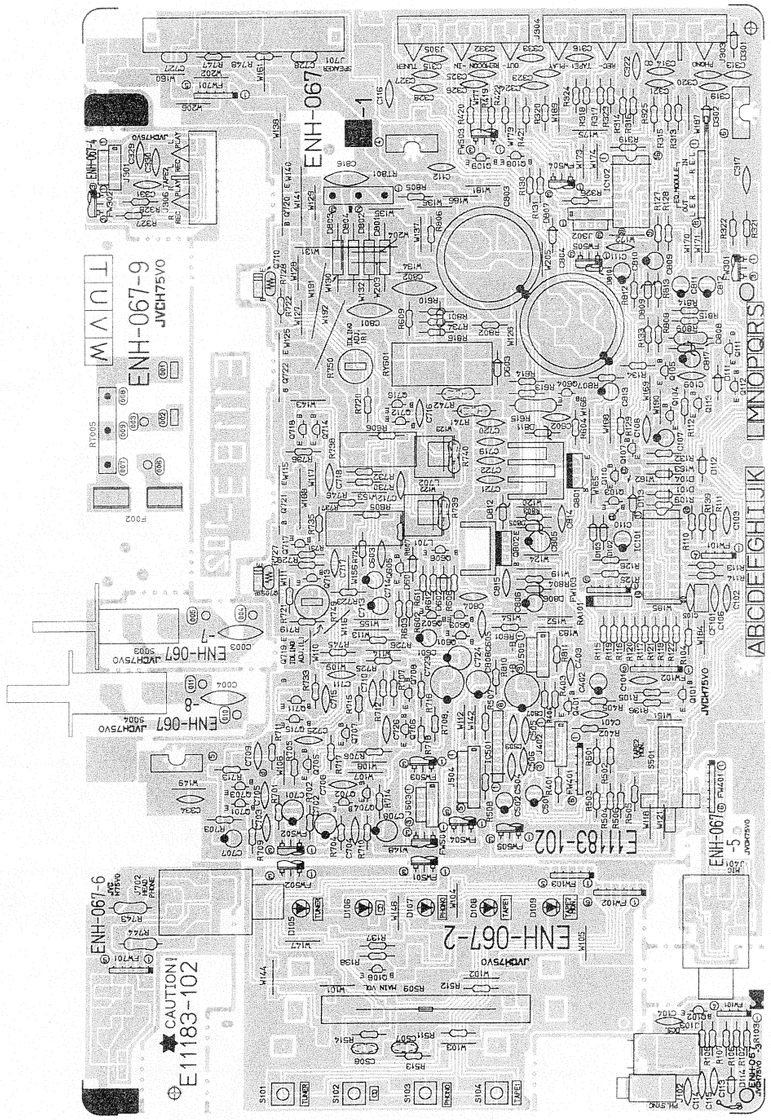


TRANSITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	Q101	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q102	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q103	DTA114YN	SILICON	ROHM	
	Q104	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q105	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q106	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q107	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q108	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q109	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q110	DTA114YN	SILICON	ROHM	
	Q111	DTC144EN	SILICON	ROHM	
	Q112	DTC144EN	SILICON	ROHM	
	Q113	DTA114YN	SILICON	ROHM	
	Q401	2SC2389(S,E)	SILICON	ROHM	
	Q601	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q602	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q603	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q604	2SC2389(S,E)	SILICON	ROHM	
	Q605	2SC2389(S,E)	SILICON	ROHM	
	Q606	2SC2389(S,E)	SILICON	ROHM	
	Q701	2SC2240(A,B)	SILICON	TOSHIBA	
	Q702	2SC2240(A,B)	SILICON	TOSHIBA	
	Q703	2SC2240(A,B)	SILICON	TOSHIBA	
	Q704	2SC2240(A,B)	SILICON	TOSHIBA	
	Q705	2SA1038(S,E)	SILICON		
	Q706	2SA1038(S,E)	SILICON		
	Q707	2SA1038(S,E)	SILICON		
	Q708	2SA1038(S,E)	SILICON		
	Q709	2SD636(Q,R)	SILICON	MATSUSHITA	
	Q710	2SD636(Q,R)	SILICON	MATSUSHITA	
	Q711	2SC2389(S,E)	SILICON	ROHM	
	Q712	2SC2389(S,E)	SILICON	ROHM	
	Q713	2SA1038(S,E)	SILICON		
	Q714	2SA1038(S,E)	SILICON		
	Q715	2SC2235(O,Y)	SILICON	TOSHIBA	
	Q716	2SC2235(O,Y)	SILICON	TOSHIBA	
	Q717	2SA965(O,Y)	SILICON	TOSHIBA	
	Q718	2SA965(O,Y)	SILICON	TOSHIBA	
	Q719	2SD716LB(R,O)	SILICON	TOSHIBA	
	Q720	2SD716LB(R,O)	SILICON	TOSHIBA	
	Q721	2SB686LB(R,O)	SILICON	TOSHIBA	
	Q722	2SB686LB(R,O)	SILICON	TOSHIBA	
	Q801	2SD313V(D,E)	SILICON	SANYO	
	Q802	2SB507V(D,E)	SILICON	SANYO	

⚠ : SAFETY PARTS

I. C. S

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC101	M50761-304P	I.C.	MITSUBISHI	
	IC102	TC4052BP	I.C.	TOSHIBA	
	IC501	M5218L-R	I.C.	MITSUBISHI	

⚠ : SAFETY PARTS

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D101	1S2473HX	SILICON	ROHM	
	D102	1S2473HX	SILICON	ROHM	
	D103	1S2473HX	SILICON	ROHM	
	D104	1S2473HX	SILICON	ROHM	
	D105	SLR-55DC50F	L.E.D.	ROHM	
	D106	SLR-55DC50F	L.E.D.	ROHM	
	D107	SLR-55DC50F	L.E.D.	ROHM	
	D108	SLR-55DC50F	L.E.D.	ROHM	
	D109	SLR-55VC50F	L.E.D.	ROHM	
	D111	1S2473HX	SILICON	ROHM	
	D112	1S2473HX	SILICON	ROHM	
	D113	1S2473HX	SILICON	ROHM	
	D114	RD6.8EB3	ZENER	NEC	
	D601	1S2473HX	SILICON	ROHM	
	D602	1S2473HX	SILICON	ROHM	
	D603	1S2473HX	SILICON	ROHM	
	D801	30DL2FC	SILICON	NIHONINTER	
	D802	30DL2FC	SILICON	NIHONINTER	
	D803	30DL2FC	SILICON	NIHONINTER	
	D804	30DL2FC	SILICON	NIHONINTER	
	D805	RD15EB3	ZENER	NEC	
	D806	RD15EB3	ZENER	NEC	
	D807	1S2473HX	SILICON	ROHM	
	D808	RD5.1EB2	ZENER	NEC	
	D809	RD9.1EB3	ZENER	NEC	
	D810	RD9.1EB3	ZENER	NEC	
	D811	RD16EB3	ZENER	NEC	
	D812	RD16EB3	ZENER	NEC	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C104	QCF21HP-103	0.01MF	50V	CERAMIC	
	C105	QCS21HJ-151	150PF	50V	CERAMIC	
	C106	QCS21HJ-151	150PF	50V	CERAMIC	
	C107	QETB1HM-225	2.2MF	50V	ELECTRO	
	C108	QCF21HP-103	0.01MF	50V	CERAMIC	
	C109	QCF21HP-103	0.01MF	50V	CERAMIC	
	C110	QETB1EM-106	10MF	25V	ELECTRO	
	C111	QCF21HP-103	0.01MF	50V	CERAMIC	
	C113	QCS21HJ-101	100PF	50V	CERAMIC	
	C114	QCF21HP-103	0.01MF	50V	CERAMIC	
	C115	QCF21HP-473	0.047MF	50V	CERAMIC	
	C313	QCF21HP-223	0.022MF	50V	CERAMIC	
	C314	QCF21HP-103	0.01MF	50V	CERAMIC	
	C315	QCF21HP-103	0.01MF	50V	CERAMIC	
	C316	QCF21HP-103	0.01MF	50V	CERAMIC	
	C317	QCF21HP-103	0.01MF	50V	CERAMIC	
	C329	QCS21HJ-101	100PF	50V	CERAMIC	
	C331	QCS21HJ-101	100PF	50V	CERAMIC	
	C332	QCF21HP-103	0.01MF	50V	CERAMIC	
	C333	QCF21HP-103	0.01MF	50V	CERAMIC	
	C401	QCS21HJ-221	220PF	50V	CERAMIC	
	C402	QETB1EM-106	10MF	25V	ELECTRO	
	C403	QCS21HJ-101	100PF	50V	CERAMIC	
	C501	QETB1EM-106	10MF	25V	ELECTRO	
	C502	QETB1EM-106	10MF	25V	ELECTRO	
	C503	QCS21HJ-100	10PF	50V	CERAMIC	
	C504	QCS21HJ-100	10PF	50V	CERAMIC	
	C505	QCS21HJ-101	100PF	50V	CERAMIC	
	C506	QCS21HJ-101	100PF	50V	CERAMIC	
	C601	QETB1AM-476	47MF	10V	ELECTRO	
	C602	QCF21HP-103	0.01MF	50V	CERAMIC	
	C603	QCF21HP-103	0.01MF	50V	CERAMIC	
	C604	QCF21HP-103	0.01MF	50V	CERAMIC	
	C605	QCF21HP-103	0.01MF	50V	CERAMIC	
	C701	QETB1HM-475	4.7MF	50V	ELECTRO	
	C702	QETB1HM-475	4.7MF	50V	ELECTRO	
	C703	QCS21HJ-100	10PF	50V	CERAMIC	
	C704	QCS21HJ-100	10PF	50V	CERAMIC	
	C705	QCS21HJ-101	100PF	50V	CERAMIC	
	C706	QCS21HJ-101	100PF	50V	CERAMIC	
	C707	QETB1AM-107	100MF	10V	ELECTRO	
	C708	QETB1AM-107	100MF	10V	ELECTRO	
	C709	QCS21HJ-220	22PF	50V	CERAMIC	
	C710	QCS21HJ-220	22PF	50V	CERAMIC	
	C711	QCF21HP-103	0.01MF	50V	CERAMIC	
	C712	QCF21HP-103	0.01MF	50V	CERAMIC	
	C713	QETB1HM-226	22MF	50V	ELECTRO	
	C714	QETB1HM-226	22MF	50V	ELECTRO	
	C715	QCS21HJ-470	47PF	50V	CERAMIC	
	C716	QCS21HJ-470	47PF	50V	CERAMIC	
	C717	QCS21HJ-470	47PF	50V	CERAMIC	
	C718	QCS21HJ-470	47PF	50V	CERAMIC	
	C719	QFN81HK-473	0.047MF	50V	MYLAR	
	C720	QFN81HK-473	0.047MF	50V	MYLAR	
	C721	QFN81HK-473	0.047MF	50V	MYLAR	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C722	QFN81HK-473	0.047MF	50V	MYLAR	
	C723	QETB1HM-227	220MF	50V	ELECTRO	
	C725	QCS21HJ-390	39PF	50V	CERAMIC	
	C726	QCS21HJ-390	39PF	50V	CERAMIC	
	C803	QEZ0098-478	4700MF		NON POLE	
	C804	QEZ0098-478	4700MF		NON POLE	
	C805	QETB1EM-476	47MF	25V	ELECTRO	
	C806	QETB1EM-476	47MF	25V	ELECTRO	
	C807	QETB1CM-477	470MF	16V	ELECTRO	
	C808	QETB1CM-107	100MF	16V	ELECTRO	
	C809	QETB1CM-476	47MF	16V	ELECTRO	
	C810	QETB1CM-476	47MF	16V	ELECTRO	
	C811	QETB1CM-476	47MF	16V	ELECTRO	
	C812	QETB1CM-476	47MF	16V	ELECTRO	
	C813	QETB1HM-225	2.2MF	50V	ELECTRO	
	C814	QCF21HP-103	0.01MF	50V	CERAMIC	
	C815	QCF21HP-103	0.01MF	50V	CERAMIC	
	C817	QETB1AM-107	100MF	10V	ELECTRO	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R102	QRD148J-100S	10	1/4W	CARBON	
	R103	QRD148J-101S	100	1/4W	CARBON	
	R104	QRD148J-104S	100K	1/4W	CARBON	
	R105	QRD148J-473S	47K	1/4W	CARBON	
	R106	QRD148J-101S	100	1/4W	CARBON	
	R107	QRD148J-473S	47K	1/4W	CARBON	
	R108	QRD148J-473S	47K	1/4W	CARBON	
	R109	QRD148J-102S	1K	1/4W	CARBON	
	R110	QRD148J-222S	2.2K	1/4W	CARBON	
	R111	QRD148J-103S	10K	1/4W	CARBON	
	R112	QRD148J-103S	10K	1/4W	CARBON	
	R113	QRD148J-105S	1M	1/4W	CARBON	
	R114	QRD148J-332S	3.3K	1/4W	CARBON	
	R115	QRD148J-103S	10K	1/4W	CARBON	
	R116	QRD148J-103S	10K	1/4W	CARBON	
	R117	QRD148J-103S	10K	1/4W	CARBON	
	R118	QRD148J-103S	10K	1/4W	CARBON	
	R119	QRD148J-103S	10K	1/4W	CARBON	
	R120	QRD148J-103S	10K	1/4W	CARBON	
	R121	QRD148J-103S	10K	1/4W	CARBON	
	R122	QRD148J-103S	10K	1/4W	CARBON	
	R125	QRD148J-223S	22K	1/4W	CARBON	
	R126	QRD148J-223S	22K	1/4W	CARBON	
	R127	QRD148J-223S	22K	1/4W	CARBON	
	R128	QRD148J-223S	22K	1/4W	CARBON	
	R129	QRD148J-473S	47K	1/4W	CARBON	
	R130	QRD148J-104S	100K	1/4W	CARBON	
	R131	QRD148J-104S	100K	1/4W	CARBON	
	R132	QRD148J-473S	47K	1/4W	CARBON	
	R133	QRD148J-103S	10K	1/4W	CARBON	
	R134	QRD148J-103S	10K	1/4W	CARBON	
	R136	QRD148J-331S	330	1/4W	CARBON	
	R137	QRD148J-151S	150	1/4W	CARBON	
	R138	QRD148J-332S	3.3K	1/4W	CARBON	
	R139	QRD148J-103S	10K	1/4W	CARBON	
	R315	QRD148J-102S	1K	1/4W	CARBON	
	R316	QRD148J-102S	1K	1/4W	CARBON	
	R317	QRD148J-222S	2.2K	1/4W	CARBON	
	R318	QRD148J-222S	2.2K	1/4W	CARBON	
	R319	QRD148J-153S	15K	1/4W	CARBON	
	R320	QRD148J-153S	15K	1/4W	CARBON	
	R321	QRD148J-564S	560K	1/4W	CARBON	
	R322	QRD148J-564S	560K	1/4W	CARBON	
	R323	QRD148J-472S	4.7K	1/4W	CARBON	
	R324	QRD148J-472S	4.7K	1/4W	CARBON	
	R325	QRD148J-102S	1K	1/4W	CARBON	
	R326	QRD148J-102S	1K	1/4W	CARBON	
	R327	QRD148J-102S	1K	1/4W	CARBON	
	R328	QRD148J-102S	1K	1/4W	CARBON	
	R401	QRD148J-102S	1K	1/4W	CARBON	
	R402	QRD148J-103S	10K	1/4W	CARBON	
	R403	QRD148J-105S	1M	1/4W	CARBON	
	R404	QRD148J-103S	10K	1/4W	CARBON	
	R405	QRD148J-121S	120	1/4W	CARBON	
	R419	QRD148J-272S	2.7K	1/4W	CARBON	

⚠ : SAFETY PARTS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R420	QRD148J-272S	2.7K	1/4W	CARBON	
	R421	QRD148J-222S	2.2K	1/4W	CARBON	
	R422	QRD148J-222S	2.2K	1/4W	CARBON	
	R501	QRD148J-182S	1.8K	1/4W	CARBON	
	R502	QRD148J-182S	1.8K	1/4W	CARBON	
	R503	QRD148J-823S	82K	1/4W	CARBON	
	R504	QRD148J-823S	82K	1/4W	CARBON	
	R505	QRD148J-823S	82K	1/4W	CARBON	
	R506	QRD148J-823S	82K	1/4W	CARBON	
	R507	QRD148J-393S	39K	1/4W	CARBON	
	R508	QRD148J-393S	39K	1/4W	CARBON	
	R509	QVTB01A-EF5C			VARIABLE	
	R601	QRD148J-334S	330K	1/4W	CARBON	
	R602	QRD148J-562S	5.6K	1/4W	CARBON	
	R603	QRD148J-683S	68K	1/4W	CARBON	
	R604	QRD148J-103S	10K	1/4W	CARBON	
	R605	QRD148J-122S	1.2K	1/4W	CARBON	
	R606	QRD148J-122S	1.2K	1/4W	CARBON	
	R607	QRD148J-102S	1K	1/4W	CARBON	
	R608	QRD148J-102S	1K	1/4W	CARBON	
	R609	QRD148J-151S	150	1/4W	CARBON	
	R610	QRD148J-151S	150	1/4W	CARBON	
	R611	QRD148J-104S	100K	1/4W	CARBON	
	R612	QRD148J-823S	82K	1/4W	CARBON	
⚠	R613	QRD145J-471S	470	1/4W	UNF.CARBON	
	R701	QRD148J-222S	2.2K	1/4W	CARBON	
	R702	QRD148J-222S	2.2K	1/4W	CARBON	
	R703	QRD148J-473S	47K	1/4W	CARBON	
	R704	QRD148J-473S	47K	1/4W	CARBON	
	R705	QRD148J-821S	820	1/4W	CARBON	
	R706	QRD148J-821S	820	1/4W	CARBON	
⚠	R707	QRD145J-150S	15	1/4W	UNF.CARBON	
⚠	R708	QRD145J-150S	15	1/4W	UNF.CARBON	
	R709	QRD148J-822S	8.2K	1/4W	CARBON	
	R710	QRD148J-822S	8.2K	1/4W	CARBON	
	R711	QRD148J-473S	47K	1/4W	CARBON	
	R712	QRD148J-473S	47K	1/4W	CARBON	
	R713	QRD148J-391S	390	1/4W	CARBON	
	R714	QRD148J-391S	390	1/4W	CARBON	
	R715	QRD148J-152S	1.5K	1/4W	CARBON	
	R716	QRD148J-152S	1.5K	1/4W	CARBON	
	R717	QRD148J-223S	22K	1/4W	CARBON	
	R718	QRD148J-223S	22K	1/4W	CARBON	
	R719	QRD148J-332S	3.3K	1/4W	CARBON	
	R720	QRD148J-332S	3.3K	1/4W	CARBON	
	R721	QRD148J-102S	1K	1/4W	CARBON	
	R722	QRD148J-102S	1K	1/4W	CARBON	
⚠	R723	QRD145J-472S	4.7K	1/4W	UNF.CARBON	
	R724	QRD148J-472S	4.7K	1/4W	CARBON	
	R725	QRD148J-242S	2.4K	1/4W	CARBON	
	R726	QRD148J-242S	2.4K	1/4W	CARBON	
⚠	R729	QRD145J-272S	2.7K	1/4W	UNF.CARBON	
⚠	R730	QRD145J-272S	2.7K	1/4W	UNF.CARBON	
⚠	R731	QRD145J-471S	470	1/4W	UNF.CARBON	
⚠	R732	QRD145J-471S	470	1/4W	UNF.CARBON	
⚠	R733	QRZ0062-100	10	1/4W	FUSIBLE	
⚠	R734	QRZ0062-100	10	1/4W	FUSIBLE	
⚠	R735	QRZ0062-100	10	1/4W	FUSIBLE	
⚠	R736	QRZ0062-100	10	1/4W	FUSIBLE	
	R737	ERF032K-R22			CEMENT	
	R738	ERF032K-R22			CEMENT	
⚠	R739	QRD145J-330S	33	1/4W	UNF.CARBON	
⚠	R740	QRD145J-330S	33	1/4W	UNF.CARBON	
⚠	R741	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R742	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R743	QRG012J-331AF	330	1W	O.M.FILM	
⚠	R744	QRG012J-331AF	330	1W	O.M.FILM	
⚠	R745	QRD145J-101S	100	1/4W	UNF.CARBON	
⚠	R746	QRD145J-470S	47	1/4W	UNF.CARBON	
	R749	QVZ3501-222			VARIABLE	
	R750	QVZ3501-222			VARIABLE	
⚠	R801	QRZ0062-270	27	1/4W	FUSIBLE	
⚠	R802	QRZ0062-330	33	1/4W	FUSIBLE	
	R803	QRD148J-392S	3.9K	1/4W	CARBON	
	R804	QRD148J-332S	3.3K	1/4W	CARBON	
	R805	QRD148J-103S	10K	1/4W	CARBON	
	R806	QRD148J-223S	22K	1/4W	CARBON	
	R807	QRD148J-103S	10K	1/4W	CARBON	
⚠	R808	QRD145J-560S	56	1/4W	UNF.CARBON	
⚠	R809	QRD125J-121	120	1/2W	UNF.CARBON	
	R810	QRD148J-471S	470	1/4W	CARBON	
	R811	QRD148J-471S	470	1/4W	CARBON	
	R812	QRD148J-471S	470	1/4W	CARBON	
	R813	QRD148J-471S	470	1/4W	CARBON	
	R814	QRD148J-331S	330	1/4W	CARBON	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R815	QRD148J-331S	330	1/4W	CARBON	
⚠	R816	QRZ0062-270	27	1/4W	FUSIBLE	
	RA101	QRB045J-103	10K	4W	ARRAY	

⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		A41096	TAB	
		ENH-060B	P.C.BOARD ASSY	L
		EWT011-091	TERMINAL WIRE	
		E11183-102	CIRCUIT BOARD	
		E303908-001	STAY BRACKET	
		E303909-001	STAY BRACKET	
		E303929-001	HEAT SINK	
		E33754-001	TIE BAND	
		E69826-H40B	HEAT SINK	
		E70306-001	HEAT SINK	
		E70859-001	EARTH PLATE	
		SBSB3008CC	SCREW	
		SBSB3008CC	SCREW	
		SBSB3008CC	SCREW	
		SBSB3008Z	SCREW	

⚠ : SAFETY PARTS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		SBSE3012CC	SCREW	
	J102	QMS2501-105	JACK ASSY	
	J103	QMS3501-018	JACK ASSY	
	J301	E04365-003	SOCKET ASSY	
	J302	E04365-003	SOCKET ASSY	
	J303	EMN00TV-402A	PIN JACK ASSY	
	J304	EMN00TV-402A	PIN JACK ASSY	
	J305	EMN00TV-602A	PIN JACK ASSY	
	J306	EMN00TV-402A	PIN JACK ASSY	
	J401	QMS6A20-011	JACK ASSY	
	J402	E04365-003	SOCKET ASSY	
	J503	E04365-003	SOCKET ASSY	
	J504	E04365-005	F.W.SOCKET	
	J505	E04365-003	SOCKET ASSY	
	J701	EMB90YV-401A	SPK.TERMINAL	
	J702	QMS6A20-041	JACK ASSY	
	L701	EQL0001-R45	INDUCTOR	
	L702	EQL0001-R45	INDUCTOR	
	S101	ESP0001-011	PUSH SWITCH	
	S102	ESP0001-011	PUSH SWITCH	
	S103	ESP0001-011	PUSH SWITCH	
	S104	ESP0001-011	PUSH SWITCH	
	S501	QST5101-E12	PUSH SWITCH	
	CF101	ECX0000-400KS	RESONATOR	
	RT801	E67764-103	TERMINAL	
	RY601	ESK5D24-218	RELAY	

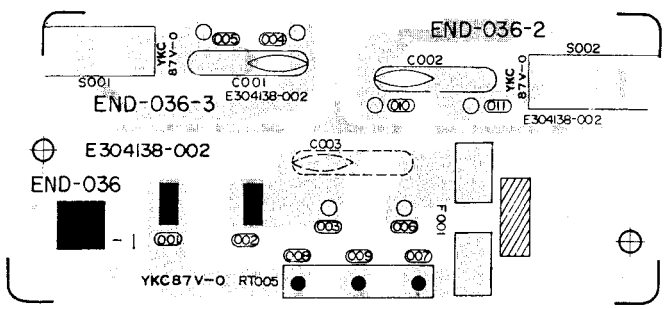
⚠ : SAFETY PARTS

■ END-036 □ Power Supply P.C. Board Ass'y

Note: END-036 □ Varies according to the areas employed. See note (1) when placing an order.

Note (1)

P.C. Board Ass'y	Designated Areas
END-036 C	Europe, Australia & West Germany
END-036 DBS	U.K.



CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C001	QCZ9038-103	0.01MF		CERAMIC	C
	C001	QCZ9038-103BS	0.01MF		CERAMIC	DBS

⚠ : SAFETY PARTS

OTHERS

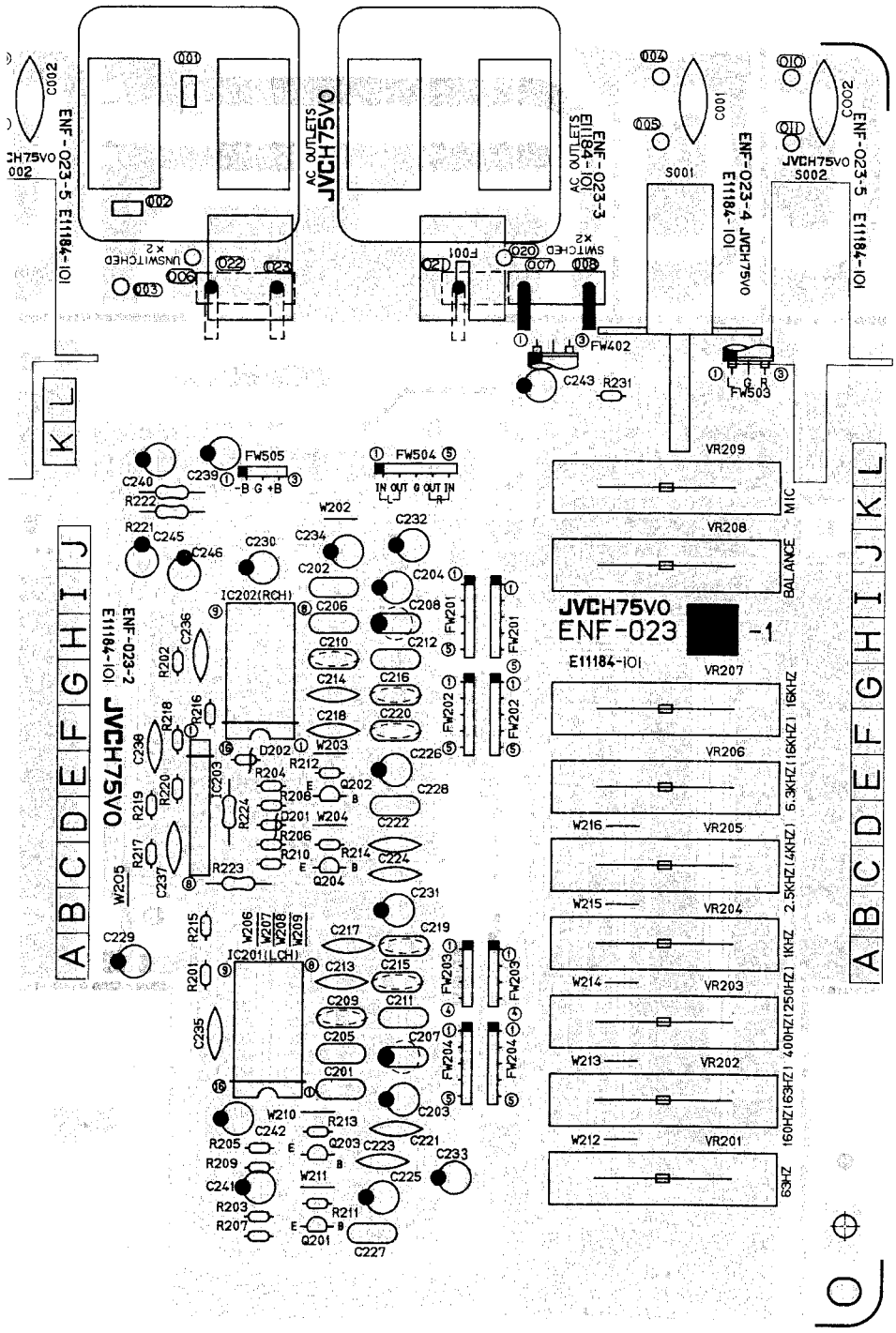
⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMG7331-001	FUSE CLIP	
		E304138-002	CIRCUIT BOARD	C
		E304138-002BS	CIRCUIT BOARD	DBS
		E65508-002	TAB	
		E67764-203	TERMINAL ASSY	
⚠	S001	QSP1106-004	PUSH SWITCH	C
⚠	S001	QSP1106-004BS	PUSH SWITCH	DBS

⚠ : SAFETY PARTS

ENF-023 □ SEA/AC Outlet P.C. Board Ass'y

Note: ENF-023 □ Varies according to the area employed. See note (1) when placing an order.
Note (1)

P.C. Board Ass'y	Designated Areas
ENF-023 J	U.S. Military Market & other Countries
ENF-023 K	Europe, Australia & U.K.
ENF-023 L	West Germany



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⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC201	M5226P-26	I.C.	MITSUBISHI	
	IC202	M5226P-26	I.C.	MITSUBISHI	
	IC203	M5218L-R	I.C.	MITSUBISHI	

⚠ : SAFETY PARTS

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D201	MTZ9.1C	ZENER	ROHM	
	D202	MTZ9.1C	ZENER	ROHM	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C001	QCZ9018-103	0.01MF		CERAMIC	J
	C201	QFN81HK-823	0.082MF	50V	MYLAR	
	C202	QFN81HK-823	0.082MF	50V	MYLAR	
	C203	QETB1HM-105	1MF	50V	ELECTRO	
	C204	QETB1HM-105	1MF	50V	ELECTRO	
	C205	QFN81HK-123	0.012MF	50V	MYLAR	
	C206	QFN81HK-123	0.012MF	50V	MYLAR	
	C207	QETB1HM-474	0.47MF	50V	ELECTRO	
	C208	QETB1HM-474	0.47MF	50V	ELECTRO	
	C209	QCY21HK-472	4700PF	50V	CERAMIC	
	C210	QCY21HK-472	4700PF	50V	CERAMIC	
	C211	QFN81HK-823	0.082MF	50V	MYLAR	
	C212	QFN81HK-823	0.082MF	50V	MYLAR	
	C213	QCY21HK-102	1000PF	50V	CERAMIC	
	C214	QCY21HK-102	1000PF	50V	CERAMIC	
	C215	QFN81HK-223	0.022MF	50V	MYLAR	
	C216	QFN81HK-223	0.022MF	50V	MYLAR	
	C217	QCS21HJ-271	270PF	50V	CERAMIC	
	C218	QCS21HJ-271	270PF	50V	CERAMIC	
	C219	QCY21HK-472	4700PF	50V	CERAMIC	
	C220	QCY21HK-472	4700PF	50V	CERAMIC	
	C229	QETB1HM-475	4.7MF	50V	ELECTRO	
	C230	QETB1HM-475	4.7MF	50V	ELECTRO	
	C231	QETB1EM-106	10MF	25V	ELECTRO	
	C232	QETB1EM-106	10MF	25V	ELECTRO	
	C233	QETB1CM-226	22MF	16V	ELECTRO	
	C234	QETB1CM-226	22MF	16V	ELECTRO	
	C235	QCS21HJ-101	100PF	50V	CERAMIC	
	C236	QCS21HJ-101	100PF	50V	CERAMIC	
	C237	QCS21HJ-100	10PF	50V	CERAMIC	
	C238	QCS21HJ-100	10PF	50V	CERAMIC	
	C239	QETB1CM-107	100MF	16V	ELECTRO	
	C240	QETB1CM-107	100MF	16V	ELECTRO	
	C241	QETB1CM-226	22MF	16V	ELECTRO	
	C242	QETB1CM-226	22MF	16V	ELECTRO	
	C243	QETB1EM-106	10MF	25V	ELECTRO	
	C245	QETB1CM-226	22MF	16V	ELECTRO	
	C246	QETB1CM-226	22MF	16V	ELECTRO	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R201	QRD161J-472	4.7K	1/6W	CARBON	
	R202	QRD161J-472	4.7K	1/6W	CARBON	
	R215	QRD161J-102	1K	1/6W	CARBON	
	R216	QRD161J-102	1K	1/6W	CARBON	
	R217	QRD161J-473	47K	1/6W	CARBON	
	R218	QRD161J-473	47K	1/6W	CARBON	
	R219	QRD161J-273	27K	1/6W	CARBON	
	R220	QRD161J-273	27K	1/6W	CARBON	
⚠	R221	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R222	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R223	QRD145J-181S	180	1/4W	UNF.CARBON	
⚠	R224	QRD145J-181S	180	1/4W	UNF.CARBON	
	R231	QRD161J-222	2.2K	1/6W	CARBON	
	VR202	QVWB01W-E15C			VARIABLE	
	VR203	QVWB01W-E15C			VARIABLE	
	VR204	QVWB01W-E15C			VARIABLE	
	VR205	QVWB01W-E15C			VARIABLE	
	VR206	QVWB01W-E15C			VARIABLE	
	VR208	QVWA01W-EF5D			VARIABLE	
	VR209	QVWA01B-E14C			VARIABLE	

⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E11184-101	CIRCUIT BOARD	
		E65508-002	TAB	J
		E67764-302	TERMINAL	J
		E67764-303	TERMINAL	J
⚠		QMC0437-002	AC SOCKET	J
⚠	S001	QSP1106-004	PUSH SWITCH	J

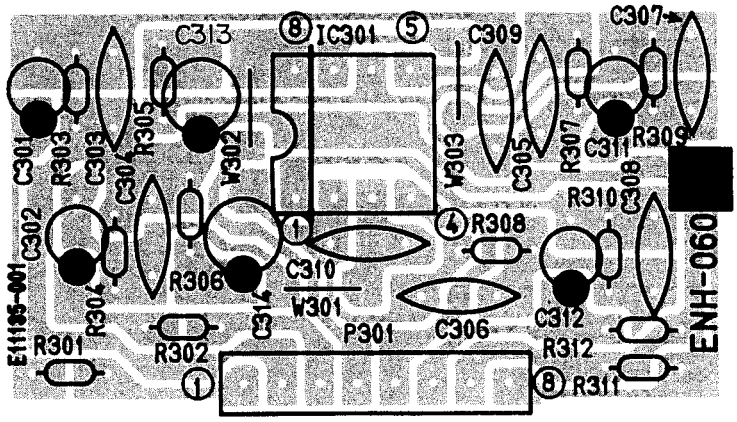
⚠ : SAFETY PARTS

ENH-060 □ Egualizer Module P.C. Board Ass'y

lote: ENH-060 □ Varies according to the area employed. See note (1) when placing an order.

ote (1)

P.C. Board Ass'y	Designated Areas
ENH-060 [A]	Europe, Australia, U.K., U.S. Military Market & Other Countries
ENH-060 [B]	West Germany



I. C. S

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC301	NJM4558D-D	I.C.		

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C301	QETB1HM-475	4.7MF	50V	ELECTRO	
	C302	QETB1HM-475	4.7MF	50V	ELECTRO	
	C303	QCY21HK-101	100PF	50V	CERAMIC	A
	C303	QCY21HK-471	470PF	50V	CERAMIC	B
	C304	QCY21HK-101	100PF	50V	CERAMIC	A
	C304	QCY21HK-471	470PF	50V	CERAMIC	B
	C305	QCY21HK-182	1800PF	50V	CERAMIC	
	C306	QCY21HK-182	1800PF	50V	CERAMIC	
	C307	QCY21HK-682	6800PF	50V	CERAMIC	
	C308	QCY21HK-682	6800PF	50V	CERAMIC	
	C309	QCY21HK-101	100PF	50V	CERAMIC	
	C310	QCY21HK-101	100PF	50V	CERAMIC	
	C311	QETB1HM-475	4.7MF	50V	ELECTRO	
	C312	QETB1HM-475	4.7MF	50V	ELECTRO	
	C313	QETB1AM-476	47MF	10V	ELECTRO	
	C314	QETB1AM-476	47MF	10V	ELECTRO	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R301	QRD161J-222	2.2K	1/6W	CARBON	
	R302	QRD161J-222	2.2K	1/6W	CARBON	
	R303	QRD161J-473	47K	1/6W	CARBON	
	R304	QRD161J-473	47K	1/6W	CARBON	
	R305	QRD161J-751	750	1/6W	CARBON	
	R306	QRD161J-751	750	1/6W	CARBON	
	R307	QRD161J-393	39K	1/6W	CARBON	
	R308	QRD161J-393	39K	1/6W	CARBON	
	R309	QRD161J-474	470K	1/6W	CARBON	
	R310	QRD161J-474	470K	1/6W	CARBON	
	R311	QRD161J-104	100K	1/6W	CARBON	
	R312	QRD161J-104	100K	1/6W	CARBON	

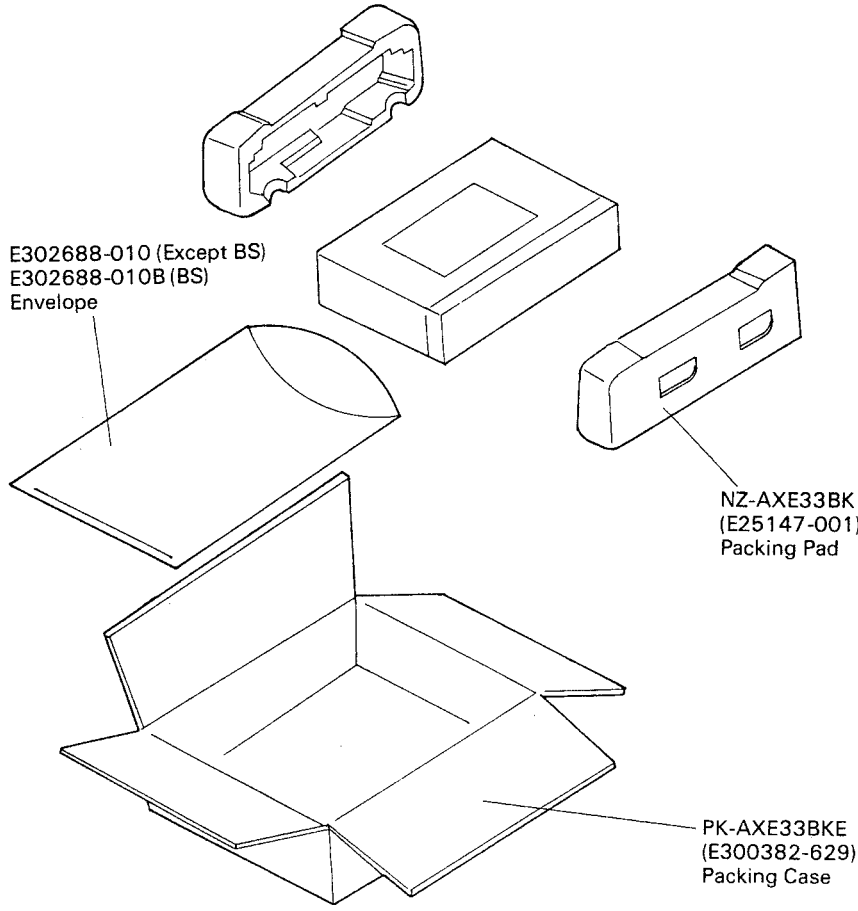
⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E11135-001	CIRCUIT BOARD	
	P301	EMV5101-008B	PLUG ASSY	

⚠ : SAFETY PARTS

Packing Materials and Part Numbers



Accessories List

⚠	Part Number	Part Name	Description	Areas
	E30580-1299A	Instruction Book		Except BS
	E30580-1299ABS	Instruction Book		BS
	BT20048B	Warranty Card		P,PG
	BT20029C	Warranty Card		A
	BT20054-006A	Warranty Card		G
	BT20064C	Warranty Card		G
	BT20060	Warranty Card		BS
	E43486-216A	Instruction Sheet		
	BT20046B	Service Information		P,PG
	BT20071A	Service Center		C
	BT20066	EEC Agency		G,BS
	E300196-033	Envelope		Except BS
	E300196-033B	Envelope		BS
	E6581-4	Envelope		U,P,PG
⚠	QMF51A2-2R5S	Fuse		U,PG
⚠	QMF51E2-1R25S	Fuse		P
	BT20054-006A	FTZ Information		G
	E35497-017	Caution Sheet	110V	P
	E35497-019	Caution Sheet	220V	U,PG

The Marks for Designated Areas

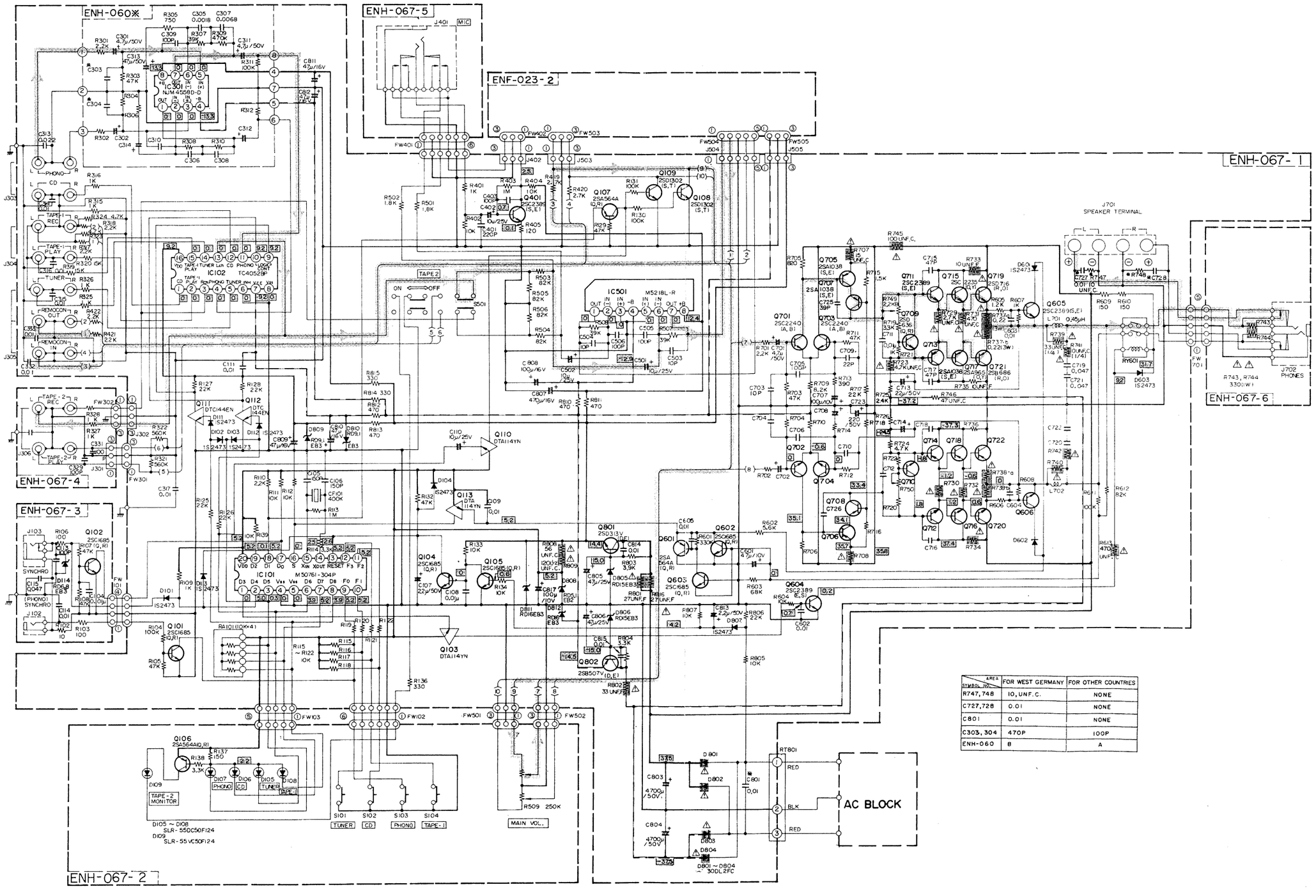
⚠ : Safety Parts

E ..... Europe
A ..... Australia
G ..... West Germany
BS ..... U.K.
P, PG ..... U.S.Military Market
U ..... Other Countries
No marks indicates all areas.

MEMO

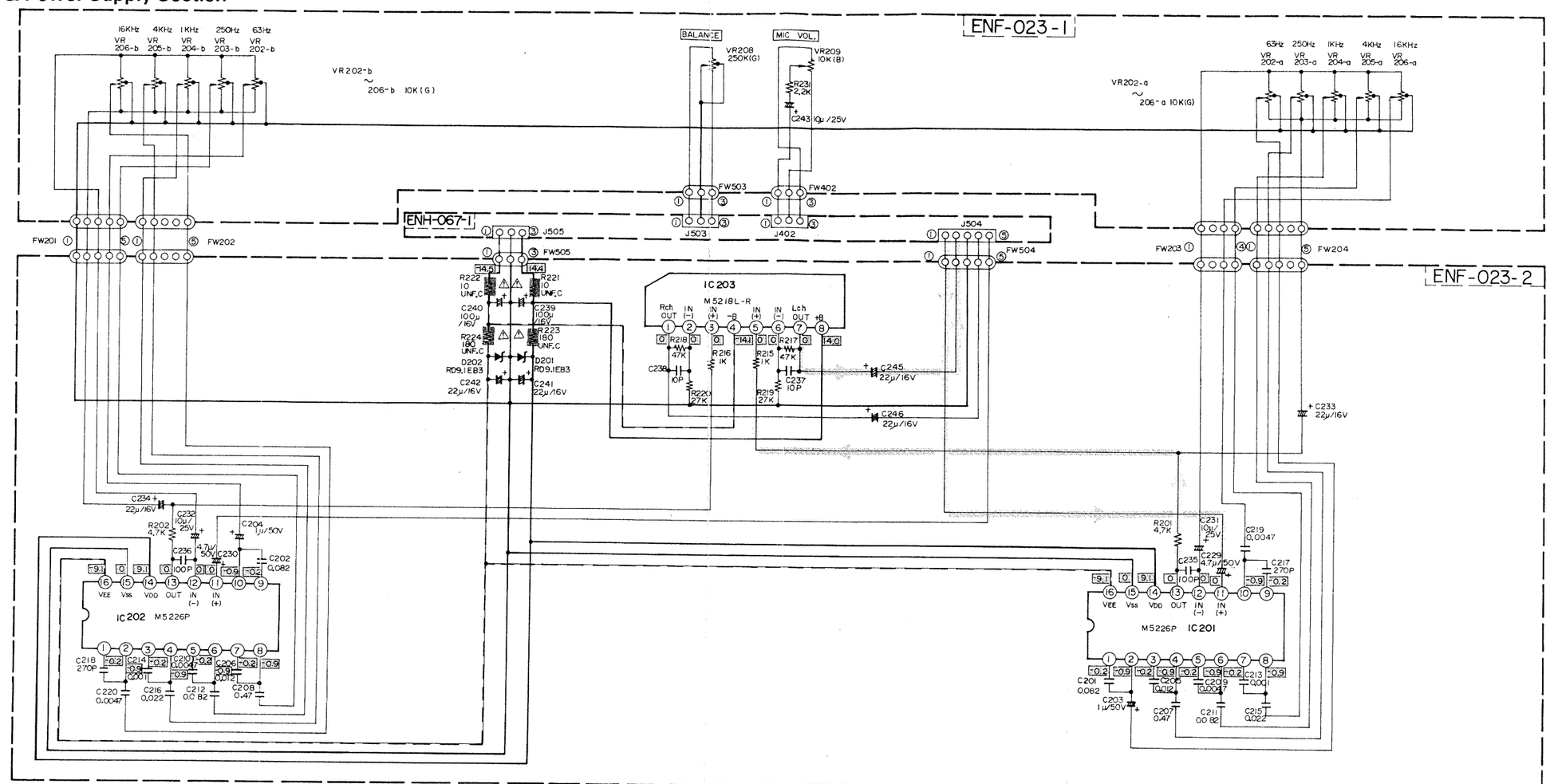
Schematic Diagram

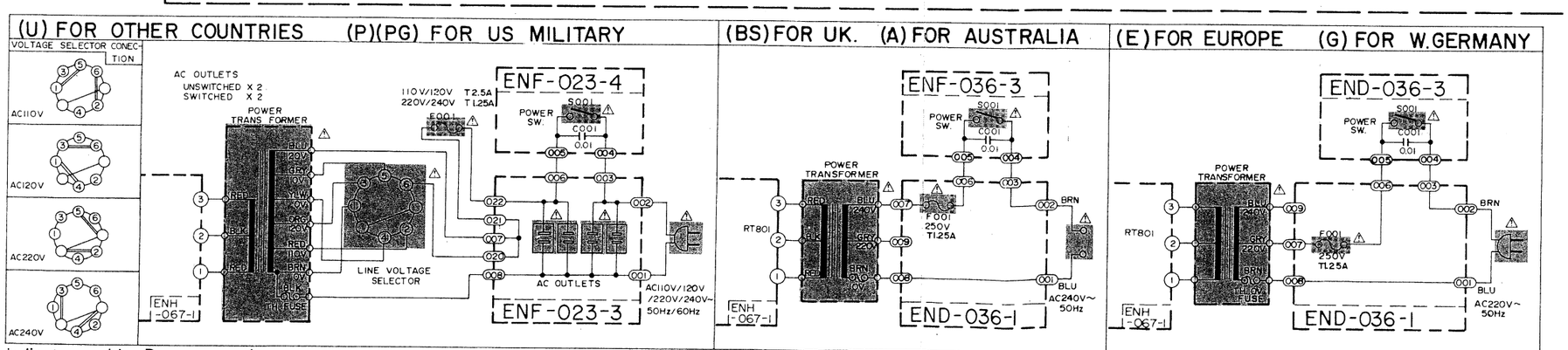
■ AX-E33BK Main Amplifier Section



AREA / SYMBOL NO.	FOR WEST GERMANY	FOR OTHER COUNTRIES
R747, 748	10, UNF. C.	NONE
C727, 728	0.01	NONE
C801	0.01	NONE
C303, 304	470P	100P
ENH-060	B	A

■ AX-E33BK SEA & Power Supply Section

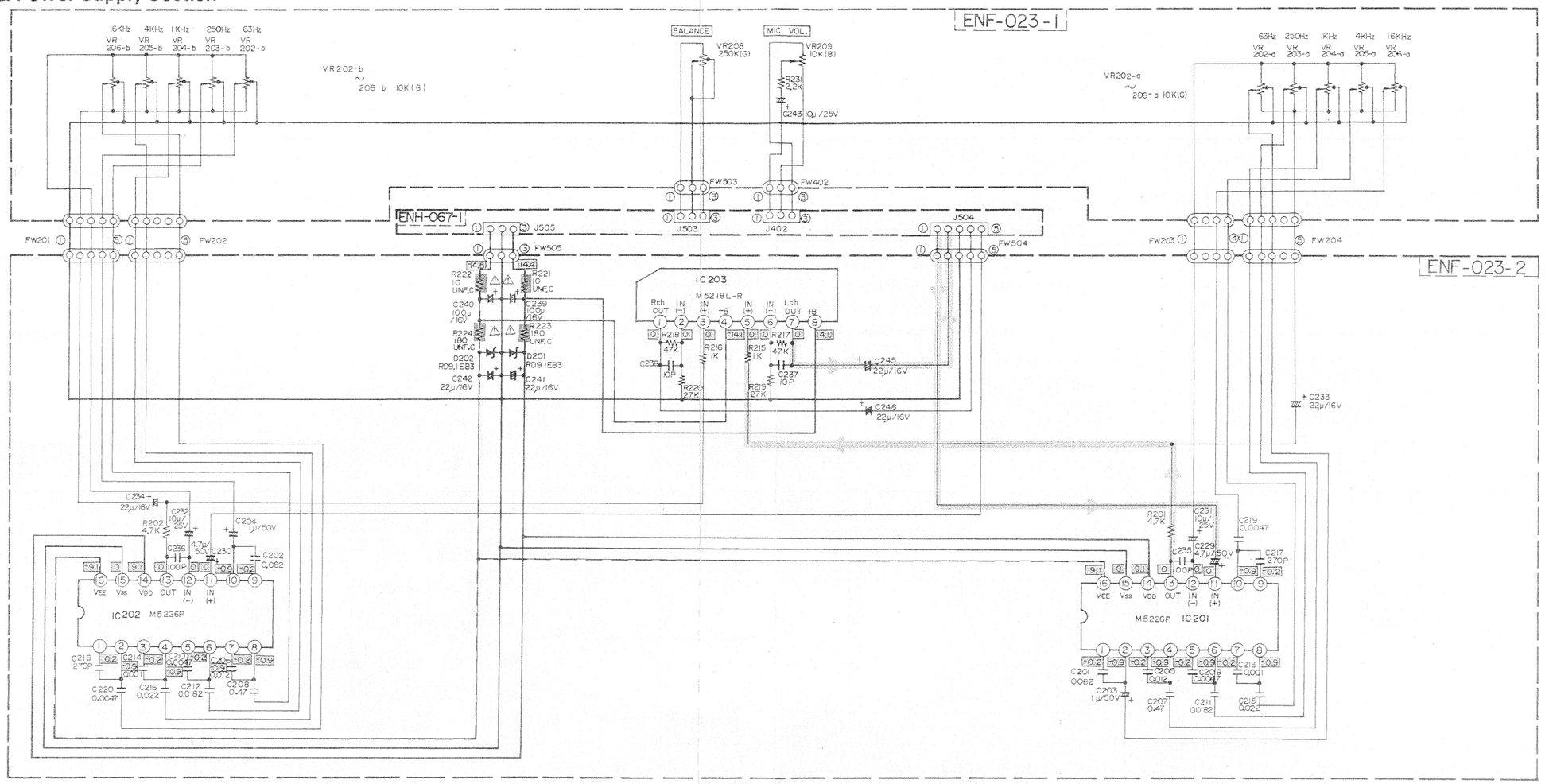


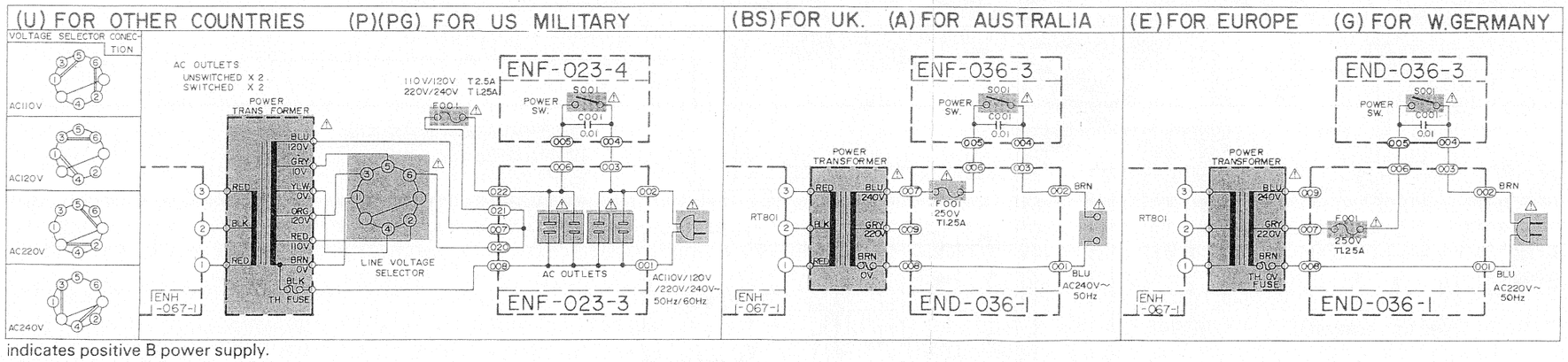


Notes:

1. —— indicates positive B power supply.
2. ----- indicates negative B power supply.
3. indicates signal path.
4. shows DC voltage to the chasiss with no signal input.
5. When replacing the parts in the darkened area ( ) and those marked with ⚠, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

AX-E33BK SEA & Power Supply Section





Notes:

1. —— indicates positive B power supply.
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6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.